

OFFICE OF NAVAL RESEARCH

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TECHNICAL REPORT 2

May, 1954

TABLES OF SCATTERING FUNCTIONS

FOR

SPHERICAL COLLOIDAL PARTICLES

(< 0.2(0.2)7.0 ; = 1.05(0.05)1.30)

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Research on the size and shape of large molecules and colloidal particles

Technical Report #2

Tables of Scattering Functions
for Spherical Colloidal Particles

bу

William James Pangonis and Wilfried Heller
Introductory Text by: A. F. Stevenson
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The following tables give the numerical values of certain coefficients arising in the theory of the scattering of a plane electromagnetic wave by a sphere. These coefficients are defined as follows:2

$$A_{n} = \frac{a_{n}}{n(n+1)}, B_{n} = \frac{b_{n}}{n(n+1)},$$

$$a_{n} = (-1)^{n} \mathbf{1}(2n+1) \frac{S_{n}'(\beta)S_{n}(\alpha) - mS_{n}'(\alpha)S_{n}(\beta)}{S_{n}'(\beta)\phi_{n}(\alpha) - m\phi_{n}'(\alpha)S_{n}(\beta)},$$

$$b_{n} = (-1)^{n+1} \mathbf{1}(2n+1) \frac{mS_{n}(\alpha)S_{n}'(\beta) - S_{n}(\beta)S_{n}'(\alpha)}{m\phi_{n}(\alpha)S_{n}'(\beta) - S_{n}(\beta)\phi_{n}'(\alpha)},$$

where

$$S_{n}(x) = \left(\frac{\pi \alpha}{2}\right)^{1/2} \int_{n+1/2}^{n+1/2} (x),$$

$$\phi_{n}(x) = \left(\frac{\pi \alpha}{2}\right)^{1/2} \left[\int_{n+1/2}^{n+1/2} (x) + (-1)^{n} i \int_{-n-1/2}^{n} (x) dx\right]$$

$$n = 1, 2, 3, ---,$$

and $\int_{n+i/2} \int_{-n-i/2}^{-i/2} are the usual Bessel functions so denoted.$ The physical meanings of d, β , m are as follows: $d = 2\pi \lambda/\lambda \quad , \beta = m \cdot d,$

where r = radius of scattering sphere,

 λ = wave-length of incident wave in surrounding m dium, m = refractive index of sphere relative to surrounding medium.

The original theory was given by G. Mie, Ann. Physik, 25, 377 (1908). Reference may also be made to: M. Born, Optik, 274 et seq: (Springer, Berlin, 1933); J. A. Stratton, Electromagnetic Theory, 563 et seq. (McGraw-Hill, New York, (1941).

The notation used here is identical with that of our previous report (Technical Report #1), except that we here write $\phi_n(\measuredangle) = S_n(\Alpha) + (-1)^n i \ G_n(\Alpha)$, where $G_n(\Alpha)$ is as defined in the previous report, namely $G_n(\Alpha) = \left(\frac{\pi}{2}\right)^{n/2} J_{-n-1/2}$ (α).

The significance of the coefficients A_n , B_n , a_n , b_n for the scattering problem is as follows: If the incident wave is of unit intensity and plane-polarized with the electric rector perpendicular to the plane of observation (i.e. the plane containing the direction of propagation of the incident wave and the direction of observation), then the intensity of the scattered wave in a direction making an angle γ with the reversed direction of the incident wave, and at a distance $r'(\gamma)\lambda$ from the center of the sphere is:

$$J_{\perp} = \frac{\lambda^2}{4\pi \kappa^2} \left| \sum_{n=1}^{\infty} \left[A_n \frac{P'_n(\cos y)}{\sin y} + B_n \frac{d}{dy} P'_n(\cos y) \right] \right|^2, (1)$$

where $P = \frac{1}{n}$ (cosy) is the usual associated Legendre function.

If the incident wave is of unit intensity and planepolarized with the electric vector parallel to the plane of
observation, then the intensity of the scattered wave in the
direction defined by the angle y is:

$$J_{n} = \frac{\lambda^{2}}{4\pi r^{2}} \left| \sum_{n=1}^{\infty} \left[A_{n} \frac{d}{dy} P'_{n}(\cos y) + B_{n} \frac{P'_{n}(\cos y)}{\sin y} \right]^{2} (2) \right|$$

The intensities of the wave scattered by unit volume of the scattering system, when the incident wave is of unit intensity, and for the two states of polarization, are, respectively:

$$I_{\perp} = NJ_{\perp}$$
, $I_{yy} = NJ_{yy}$,

where N is the number of scattering particles per unit volume.

If the incident wave is of unit intensity and unpolarized, then the intensities in the scattered wave of the components polarized perpendicular and parallel to the plane of observation in the direction defined by the angle y are $\frac{1}{2}$ J_{\perp} , $\frac{1}{2}$ J_{\parallel} , respectively, where J_{\perp} , J_{\parallel} , are given by (1) and (2) (or $\frac{1}{2}I_{\perp}$, $\frac{1}{2}I_{\parallel}$ for scattering by unit volume).

The scattering cross-section of one sphere, i.e. the total outward flux of energy in the scattered wave, when the inci-dent wave is of unit intensity and is either plane-polarized or unpolarized, is:

$$R = \frac{\lambda^{2}}{2\pi} \sum_{n=1}^{\infty} \frac{|a_{n}|^{2} + |b_{n}|^{2}}{2n+1}.$$
 (3)

The scattering coefficient, i.e. the ratio of the total outward flux of energy in the scattered wave to the flux of energy incident on the sphere in the incident wave, is:

$$K = \frac{R}{\pi r^2} = \frac{2}{\sqrt{2}} \sum_{n=1}^{\infty} \frac{|a_n|^2 + |b_n|^2}{2n+1}.$$
 (4)

The turbidity is:

$$T = NR.$$
 (5)

It will be seen from the defining equations that A_n , B_n , a_n , b_n are complex functions of the two parameters \measuredangle , m. The quantities actually tabulated, for all values of n which are significant in the infinite series (1)-(4), are as follows:

$$R(A_n), I(A_n), R(B_n), I(B_n), \frac{|a_n|^2}{2n+1}, \frac{|b_n|^2}{2n+1}$$

where R, I denote the real and imaginary parts, for the following ranges of α , m:

With the help of these tables, the cross section, scattering coefficient and turbidity are given immediately from (3), (4), (5); while the intensities of the scattered wave in any direction can be calculated without too much labor from (1), (2), since the angular functions can be obtained from an available tabulation.³

At the outset of this work, a compilation of scattering functions was already available, which covers the entire field of common aerosols (m = 1.30). For the work proceeding in this laboratory, smaller refractive ratios, as generally found in liquid dispersions, were of interest. The respective ratios appear to be adequately covered by the present functions for -values on compassing the entire so called "colloidal range." While this tabulation was well on its way to completion, a

Mathematical Tables Project: Tables of Associated Legendre Functions (New York, Columbia Press, 1945). These functions have been retabulated recently by R. O. Gumpreont and C. M. Sliepesvitch, Tables of functions of first and second partial derivatives of Legendre polynomials (Jakversity of Michigan, 1951).

Tables of Scattering Functions for Spherical Particles (National Bureau of Standards, Washington, D. C., Government Printing Office, 1948).

second set of tables⁵ appeared in print. They extended the previous tabulations⁴ to include not only the colloidal, but also the entire microscopic and even part of the visible range at particle sizes in aerosols. It also gives the functions for m = 1.20 with the limitation to the widely spaced -values of l(1)6. The latter data overlap with a few of the present tabulations. A comparison shows a generally very satisfactory agreement.

R. O. Gumprecht and C. M. Sliepcevitch; Light scattering functions for Spherical F rticles, (Ann Arbor, University of Michigan Press, 1952).

m = 1.05

n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$		
			d = .20					
1 2	+.0002623 000003		0000009		,0000000915			
		······································	d. = .40					
1	+.0020559	0000028	0000332		.000005634	.000000001		
2	0000110	0000020	-•0000		•000000001	.00000001		
			d = .60					
1	+.0066951	00002988	0002532		.000059765	•000000086		
1 2 3	0000810	•00002,00	+.0000015		.000000047	•000000000		
)	+.0000006							
	ci. = .80							
1	+.0150544	0001511	-,0010082	+.0000007	•0003022	.0000014		
1 2 3	0003285 +.0000041		+,0000106		•0000008			
			ા = 1.0	0				
1 2	+.0275135	0005048	0029965	+.0000060	.0010096	•0000120		
3	0009549 +.0000186	+.0000011	+.00000488 .0000005		•0000066			
4	-,0000002							
								
			વ = 1.2	0				
1	+.0436529 0022388	0012715 +.0000060	0070411 +.0001668	+.0000330	.0025429 .0000361	.0000661 .0000002		
1 2 3 4	+.0000637 0000011		0000027			V		
	*0000077							

						m = 1.05	
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$1b_{n}^{2/2n+1}$	
			4 = 1.4	0			
1 2 3 4	+.0625063 0045100 +.0001771 0000043	0026092 +.000024h	0142190 +.0004643 0000104 +.000002	+.0001348 0000003	.0052185 .0001464 .0000006	.00 0269 6 .0000015	
			ર્સ = 1. 6	60			
1 2 3 4 5	+.0826317 0081043 +.0004226 0000135 +.0000003	0045659 +.0000788 0000003	0256083 +.0011098 0000330 +.0000007	+.0004373 0000148	.0091318 .0004729 .0000037	.0008746 .0000887	
e! = 1.80							
1 2 3 4 5	+.102l;368 0133052 +.0008957 0000366 +.0000009	0070285 +.0002125 0000014	0421009 +.0023561 0000897 +.0000023	+.0011826 0000067	.0140569 .0012749 .0000165	.0023652 .0000400 .0000001	
	*		ಡ್ತ = 2.0	00			
1 2 3 4 5	+.1205270 0202601 +.0017252 0000883 +.0000030	0097 <u>1</u> 78 +.0001938 0000051	0641496 +.0045475 0002165 +.0000071	+.0027484 0000248	.0194957 .0029630 .0000612	.0054970 .0001489 .0000009	
	nd = 2,20						
1 2 3 4 5	+.1359978 0290239 +.0030794 0001930 +.0000080	0124333 +.0010121 0000163	0915223 +.0081111; 0001;751; +.0000190 0000006	+.0056052 0000790 +.0000004	.0248666 .0060725 .0001951 .0000016	.0112103 .0004738 .0000046	

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						m = 1.05	
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$b_n/2/2n+1$	
			d = 2.40				
1 2 3 4 6	+.1486000 0393253 +.0051116 0003889 +.0000194 0000007	0148687 +.0018599 0000448 +.0000003	1237437 +.0135293 0009564 +.0000462 0000015	+.0102788 0002197 +.0000016	.0297374 .0111595 .0005375 .0000067	.0205575 .0013183 .0000188 .0000001	
	7		d = 2.60	eranden erande de un desido un escara en escara en escara en escara en escara en en escara en en escara en esc I			
1 2 3 4 5 6	+.158753L 0507829 +.008030L 0007306 +.0000396 0000018	0169943 +.0031062 0001106 +.0000012	1571101 +.0212890 0017994 +.0001033 0000042 +.0000001	+.0166404 0005442 +.0000056	.0339886 .0186375 .0013269 .0000237 .0000001	.0332809 .0032653 .0000666 .0000005	
	4 = 2.80						
1 2 3 4 5 6	+.1674426 0628107 +.0119905 0012918 +.0000907 0000045	0189303 +.0047611; 00021466 +.0000037	1909826 +.0317894 0031871 +.0002150 0000103 +.0000004	+.0247238 0012144 +.0000174 0000001	.0378605 .0285686 .0029589 .0000742 .0000007	.0494475 .0072867 .0002090 .0000021	
			4 = 3,00)			
1 2 3 4 5 6	+.1760293 0748039 +.0171031 0021653 +.0001772 0000076	0209501 +.0067697 0005019 +.0000104	2222386 +.0452417 0053519 +.0004203 0000235 +.0000007	+.0336830 00246346 +.0000491 0000004	.04190028 .04061848 .0060226 .0002083 .0000025	.0673661 .0147808 .0005893 .0000078	
			d = 3.20)			
1 2 3 4 5 6 7	+.186014 086217 +.023403 003463 +.000327 000022 +.000001	023431 +.009018 000940 +.000027	248792 +.061590 008570 +.000779 000050 +.000002	+.042467 004577 +.000126 000001	.046362 .054106 .011285 .000533 .000009	.084934 .027462 .001511 .000027 .0000002	

						m = 1.05
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$l_{b_n}l^2/2n+1$
			# = 3,40			
1 2 3 4 5 6 7	+.198767 096653 +.030823 005302 +.000576 000044 +.000002	026818 +.011365 001633 +.000063 000001	269353 +.080364 013143 +.001370 000101 +.000006	+.050037 007823 +.000296 00000l4	.0536365 .068191 .019598 .001250 .000027 .0000003	.100073 .046941 .003555 .000063 .0000008
			Q = 3.60			
1 2 3 4 5 6 7	+.215250 105955 +.039184 007811 +.000969 000083 +.000005	031552 +.013697 002644 +.000135 000003	283574 +.100695 019370 +.002309 000193 +.000012	+.055676 012350 +.000644 000012	.063104 .082182 .031728 .002713 .000077	.111352 .074103 .007727 .000237 .000003
-			d= 3.80			
1 2 3 4 5 6 7 8	+.23576911h22h +.048206011102 +.001567000152 +.000011 -(.00000059)	038022 +.015962 004011 +.000274 000007	291976 +.121391 027500 +.003739 000353 +.000025 000001	+.059167 018075 +.001299 000031	.076044 .095774 .048136 .005482 .000201 .000003	.118334 .108450 .015592 .000621 .000008
			d = 4.00)		
12345678	+.259819121788 +.057543015261 +.002441000267 +.000021000001	0161419 +.0181962 0057326 +.0005182 0000163 +.0000002	-,295783 +.141127 037671 +.005833 000620 +.000049 000003	+.0607889 0246281 +.0024430 0000756 +.0000010	.0928839 .1091769 .0687912 .0103636 .0004877 .0000096	•1215777 •1477687 •0293155 •0015122 •0000314 •0000003

						m = 1.05
n	$R(\Lambda_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$
			d = 4.20)		
1 2 3 4 5 6 7 8	+.286096 129142 +.066829 020329 +.003677 000150 +.000010 000003	056712 +.020519 007760 +.000920 000037	296725 +.158694 049840 +.008793 001047 +.000091 000004	+.061194 031404 +.004290 000172 +.000003	.113423 .123111 .093116 .018406 .001106 .000027	.122387 .188425 .051479 .003438 .000090
			d = 4.4	0		
1 2 3 4 5 6 7 8	+.312730 136856 +.075749 026285 +.005365 000732 +.000072 000005	068311 +.023117 010008 +.001541 000079	296825 +.173208 063729 +.012838 001708 +.000166 000012	+.061237 037708 +.007048 000367 +.000008	.136622 .138701 .120098 .030812 .002355 .000073	.122474 .226246 .084571 .007331 .000239 .000004
			el = 4.6	0		
1 2 3 4 5 6 7 8	+.337680 145517 +.084078 033035 +.007600 001156 +.000127 000010	080319 +.026236 012381 +.002\138 000158 +.00000\1	298196 +.184286 078795 +.018176 002696 +.000290 000024 +.000002	+.061829 042969 +.010845 000735 +.000020	.160638 .157418 .148574 .048768 .004727 .000181 .000003	.123658 .257816 .130139 .014708 .000595
			d = 4.8	0		
123456789	+.359193 155368 +.091722 040415 +.010169 001768 +.000211 000019 +.000001	091608 +.030051 011;798 +.003660 000299 +.000010	302792 +.191759 091:271 +.021981 001:130 +.0001:90 00001:1	+.063838 046748 +.015655 001391 +.000047 000001	.183216 .180303 .177571 .073190 .008975 .000424 .000009	.127678 .280491 .187860 .027829 .001396 .000033

						1.1 2.00
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$
			d = 5.00)		
1 2 3 4 5 6 7 8 9	+.376140 166708 +.098728 048282 +.014043 002630 +.000351 000035 +.000003	10111404 +.0348034 0172176 +.0052415 0005387 +.0000223 0000005	312135 +.196194 109277 +.033356 006149 +.000804 000080 +.000006	+.0680383 0490816 +.0212447 0024863 +.0001031 0000021	.2022808 .2083203 .2066114 .104,8298 .0161595 .0009387 .0000257 .0000004	.1360766 .2944895 .2549367 .0497255 .0030944 .0000877 .0000013
			d = 5.20	0		
2 3 4 5 6 7 8	+.3881629 179319 +.105262 056127 +.018362 003809 +.000558 000061	108261 +.040561 019657 +.007113 000922 +.000047 000001	327025 +.198224 122967 +.043262 008911 +.001281 000139 +.100012	+.075052 050171 +.027189 001198 +.000217 000005	.216521 .243365 .235880 .142261 .027657 .001969 .000065	.15010l ₄ .301031 .326263 .083965 .006501 .000223 .00000l ₄
			ed = 5.4	0		·····
1 2 3 4 5 6 7 8 9	+.395655 192725 +.111578 063947 +.023425 005380 +.000864 000104 +.000010	112853 +.047250 022186 +.009278 001503 +.000094 000003	347299 +.198747 134663 +.054499 012584 +.001985 000235 +.000022 000002	+.085257 050455 +.032948 006700 +.000432 000013	.225705 .283503 .266231 .185568 .045080 .003929 .000156 .000003	.170514 .302733 .395374 .134003 .012972 .000535 .000012
			4 = 5.6	60		
123456789	+.399629 206206 +.117967 071443 +.029177 007418 +.001305 000171 +.000017	115338 +.054603 024921 +.01164359 002337 +.000178 000006	371754 *.198794144007 +.066678017329 +.002999000387 +.000039000003	+.098618 050481 +.038030 010107 +.000821 000029	.2306750 .3276171 .2990508 .2328717 .0700961 .0074715 .0003560 .0000089	.197235 .302885 .456363 .202139 .024625 .001221 .000031

						m = 1.05
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	1 bn;2/2n+1
			æ = 5.8	0		
123456789	+.\01795 21393\(\frac{1}{2}\) +.12\(\frac{1}{2}\) 078\(\frac{1}{2}\) +.035508 009996 +.001923 00027\(\frac{1}{2}\) +.000030	116707 +.062164 028002 +.014150 003472 +.000323 000014	398568 +.199433 150860 +.079239 023277 +.004423 000521 +.000068 800006	+.114671 050828 +.042045 01434 +.001434 000063 +.000001	.233413 .372987 .336019 .282549 .104145 .013572 .000772 .000023	.229341 .304971 .504542 .286295 .044511 .002655 .00081
			ં = 6.0	0		
123456789	*.103219230222 +.131972061977 +.042260013172 +.002768000428 +.000051	1175632 +.0693785 0315650 +.0166611 0019373 +.0005616 0000286 +.0000007	424516 +.201669 155386 +.091527 030498 +.006372 000971 +.000115 000011	+.1317070 0520561 +.0448376 0194574 +.0025545 0001312 +.0000035	.23512655 .41627070 .3787804 .33328287 .1481137 .0235860 .0016019 .0000559	.2634140 .3123368 .5380512 .3891461 .0766356 .0055120 .0001972 .0000040
			c1 = 6.2	0		
1234567690	+.406192239503 +.139847090993049235016985 +.004006000654 +.00008	119518 +.075713 035713 +.019220 006735 +.000934 000660 +.000002	448015 +.206309 157943 +.102897 038964 +.008976 001523 +.000189 000019 +.000001	÷.148517 054562 +.046466 024907 +.004188 000260 +.000009	.239036 .L54280 .L285561 .384405 .202047 .039266 .003356 .000130	.297033 .327971 .5575910 .498137 .125650 .010942 .0004840
			ci = 6.4	C		
1234567890 10	+.112295 216565 +.116234 096625 +.056225 021133 +.005376 001069 +.000136 000014	123492 +.080785040477 +.021804008835 +.001491000108 +.000005	467144 +.213825 159035 +.112789 048515 +.012362 002217 +.000305 00062 +.000003	+.163249 059050 +.047173 030321 +.006536 000494 +.000018	.246983 .484711 .485727 .436082 .265038 .062635 .006045 .000348 .000007	.325498 .354297 .566076 .606415 .196070 .020768 .001028 .000028

						m - 1.05
n	R(An)	$I(A_n)$	R(B _n)	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$
			a = 6.60	0		
· 234567890	+.4225852515094 +.15688611020293 +.0630370264993 +.00726580014278 +.0002141000025	1303859 +.0814707 0457883 +.0214632 011178 +.0022856 0001972 +.0000063 0000002	4811086 +.2228012 1592705 +.1209582 0588444 +.0166752 0032452 +.0004814 0000565 +.0000055	+,1746440 -,06505852 +,04732602 -,0352788 +,0097002 -,0009010 +,0000393 -,0000042	.2607719 .5068244 .5494591 .4892637 .3353408 .0959948 .0110453 .0004517	.3492880 .3903511 .5679122 .7055765 .2910072 .0378411 .0022020 .0000707
			≄ = 6,80	0		
1 2 3 4 5 6 7 8 9 10	+.4352036 2546973 +.1654404 1073799 +.0695162 0321094 +.00962897 00204557 +.0003511 000041	1408172 +.0869086 0511606 +.0272765 0135907 +.0033676 0003166 +.0000177 0000006	4899891 +.2369606 1593165 +.1271873 0695115 +.0220240 0052727 +.0007426 0000996 +.000009	+.1821878 0739411 +.0473560 0393972 +.0136888 0015751 +.00008083 0000023	.2816344 .5214517 .6175286 .5455313 .4107225 .1414391 .0194093 .0012761 .0000525	.3643756 .4436468 .5682723 .7899448 .4106641 .06615494 .0045264 .0001682 .0000042
			d= 7:0	0		
123456789	+.4565145 2567149 +.1749611 1128336 +.0755912 0381202 +.0125157 0028738 +.0004990	1549416 +.0884768 0583042 +.0303373 0163091 +.0047683 0005861 +.0000350 0000012	494589 +.2510564 1598546 +.1315716 0799949 +.0284376 0065384 +.0011219	+.186153 0841303 +.0477078 0424790 +.0183730 0026352 +.0001597 0000053 +.00000109	.3098832 .5308509 .6996501 .6067453 .4892739 .2002669 .0328216 .0025188	.3723059 .5047921 .5724931 .8495509 .5511893 .1106765 .0089430 .0005838

n	R(A _n)	$I(A_n)$	$\mathbb{R}(\mathbb{B}_n)$	$I(B_n)$	lan /2mil	by /2n+1		
1 2	4. 0005215 0000007	-:0000001	4 20		.000000362			
			d= .40					
1 2	+.0040670 0000216	0000111	0000702 +.0000002		.000022272 .000000003	.0000000006		
	 		d= .60					
1 2 3	+.0133645 0001597 +.0000011	0001190	0005208 +.0000030	00000002	.00023816 .00000018	.00000036		
					7			
	ok= .80							
1 2 3	+.0302313 0006491 +.0000080	0036095 +.0000005	0021249 +.0000219	+ .0000030	.0012191 .0000030	.00000060		
			d= 1.0	····				
1 2 3 4	4. 0553699 0018918 •. 0000367 0000004	0020467 +.0000043	0062198 +.0001004 0000011	◆ , 0000258	.0040934 .0000257	.0000516		
			d= 1.20					
1 2 3 4	+.0879669 0044519 +.0001254 0000022	0051767 +.0000238	0147153 •.0003445 0000056	♦. ○○⑦፲/ﭘﺎﭘﺎﭘ	.0103533 .0001427 .0000002	.0002887 .0000008		

						m = 1.10	
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	lanizn+1	1b _n //2n+1	
			4 = 1.40				
1 2 3 4	4.1257057 0090081 4.0003496 0000084	,0106097 +.0000974 -,0000002	0299588 +.0009626 0000216 +.0000003	*. 0005986 0000011	.0212193 .0005843 .0000025	.0011972 .0000067	
			₹ = 1.60				
1 2 3 4 5	+.1652274 01.62677 +.0008364 0000265 +.0000006	0184264 +.0003177 0000012	0544277 +. 0023120 0000682 +. 0000014	+.0019776 0000064	.0368528 .0019061 .0000144	.0039551 .0000385	
	≥ 1.80						
1 2 3 4 5	+.2029897 0268390 +.0017782 0000722 +.0000019	0279923 +.0008653 0000054	0901881 +.0049384 0001859 +.0000049	+.0054423 0000293	.0559845 .0051918 .0000650 .0000002	.0108847 .0001756 .0000007	
			વ્ય = 2.00				
1 2 3 4 5	+.2362833 0410784 +.0034383 0001742 +.0000059	0381923 +.0020299 0000203	1380933 +.0096026 0004503 +.0000147 0000003	+.0128228 0001107 +.0000003	.0763847 .0121792 .0002431 .0000013	.0256455 .0006640 .0000042	
	- 1		a = 2.20				
1 2 3 4 5	+.2637381 0589342 +.0061654 0003818 +.0000158	0479016 +.0041890 0000652 +.0000003	1968867 +.0172769 0009874 +.0000394 0000011	+.0263041 0003583 +.0000017	.0958032 .0251337 .0007821 .0000064	.0526084 .0021501 .0000200	

•		7	7	\sim
n	=			()

n	$R(A_n)$	$I(\Lambda_n)$	R(B _n)	I(B _n)	lan 2n+1	b _n 2n+1
			े # 2.40			٠
1 2 3 4 5 6	+.2855945 0798441 +.0102872 0007714 +.0000472 0000013	0565047 +.0077216 0001815 +.0000013	2626458 +.0290930 0020076 +.0000960 0000033	+.0474922 0010169 +.0000069	.1130094 .0463298 .0021776 .0000264 .0000001	.0949844 .0061015 .0000829 .0000004
			a) = 2.60			
1 2 3 4 5 6	+.3034099 1027697 +.0162517 0014539 +.0000861 0000036	0641119 +.0128728 0004531 +.0000047	3292643 +.0462190 0038012 + 0002152 0000088 +.0000003	+.0761765 0025714 +.0000248	.1282238 .0772366 .0054375 .0000939 .0000006	.1523529 .0154282 .0002973 .0000020
			ಜ = 2.80			
1 2 3 4 5 6	+.3196561 1262712 +.0244007 0025806 +.0001793 0000088	0715312 +.0195940 0010225 +.0000148 0000001	3901896 +.0680577 0067845 +.0004496 0000215 +.0000007	+.1094908 0055958 +.0000789 0000004	.1430623 .1175640 .0122696 .0002960 .0000026	.2189816 .0335747 .0009470 .0000090
			d = 3.00			
1 2 3 4 5 6 7	+.3372466 1489995 +.0349736 0043459 +.0003511 0000200 +.0000005	0801010 +.0275519 0021044 +.0000420 0000003	4404284 +.0994521 0114950 +.0008831 0000490 +.0000020	+.1429392 0120430 +.0002266 0000017	.1602019 .1653117 .0252532 .0008395 .0000101	.2858783 .0722577 .0027193 .0000347

						m = 1.10
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	lan 2n÷1	b ₁ /2n+1
			d = 3.20			
1 2 3 4 5 6 7	+.359001 169868 +.048017 006985 +.000651 000043 +.000002	091503 4.036199 003980 +.000108 000001	477771 +.135130 018591 +.001643 000105 +.000005	+.171869 022520 +.000593 000006	.1830061 .217191 .047756 .002169 .000035 .0000002	.343738 .135120 .007118 .000120 .0000008
			ai = 3.40			
1 2 3 4 5 6 7	+.387025 188326 +.069139 010762 +.001149 000086 +.000005	107574 +.044989 006953 +.000258 000004	505161 +.174446 028815 +.002913 000211 +.1000011 -(.00000048)	+.193272 038276 +.0014268 000019	.215147 .269933 .083438 .005151 .000108 .000001	.386545 .229657 .0171221 .000377 .000003
			a = 3.60			
1 2 3 4 5 6 7	+.422040 204428 +.080315 015956 +.001941 000165 +.000010	130015 +.053596 011276 +.000566 000010	517094 +.214094 042898 +.004948 000406 +.000025 000001	+.206756 059210 +.003172 000054 +.0000004	.260029 .321576 .135313 .011329 .000308 .000004	.413511 .355263 .038064 .001088 .000014
			a = 3.80			
1 2 3 4 5 6 7 8	+.462860 218744 +.098267 022819 +.003184 000299 +.000001	159864 +.062037 017052 +.001160 000028	523042 +.250464 061393 +.008083 000777 +.000048 000003	+.212480 083682 +.006534 000145 +.000002	.319728 .372223 .204629 .023203 .000829 .000012	.424961 .502092 .078415 .002905 .000049

			-13-					
						m = 1.10		
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	a_n $(2/2n+1)$	$b_n^{2/2n+1}$		
			c , = 4.0	00				
1 2 3 4 5 6 7 8 9	+.5063881 2321918 +.1162652 0315420 +.0049381 0005311 +.0000414 0000025 +.0000001	1967631 +.0706926 0241749 +.0022219 0000665 +.0000009	5246253 +.2807920 0844021 +.0127391 0013166 +.0001017 0000060 +.0000003	+.2140263 1088242 +.0124790 0003609 ÷.0000047	.3935262 .4241554 .2900986 .0444372 .0019955 .0000383 .0000004	.4280526 .6529455 .1497484 .0072184 .0001418 .0000014		
			d = 4.	50				
1 2 3 4 5 6 7 8	+.548428 245823 +.133479 042189 +.007482 000863 +.000079 000005	238408 +.080243 032335 +.003991 000153 +.000002	524777 +.303838 111266 +.019419 002238 +.000157 000013	+.214174 131547 +.022057 000839 +.000014	.476816 .481455 .388029 .079814 .004582 .000101	.428348 .789281 .264686 .016791 .000410 .000003		
			d = 4.1	40		7		
12345678	+.585086 260597 +.149316 054648 +.010990 001470 +.000144 000011	280772 +.091551 041119 +.006737 000330 +.000007	526858 +.319800 140375 +.028674 003679 +.000350 000026 +.000001	+.216220 149573 +.036002 001835 +.000037	• 561545 • 549307 • 493430 • 134746 • 009891 • 000293 • 000004	.432441. .897437 .432030 .036692 .001107 .000017		
	ol ≈ 4.60							
1 2 3 4 5 6 7 8 9	+.613981 277112 +.163517 066603 +.015678 002330 +.000252 000021 +.000001	319271 +.105508 050147 +.010710 000672 +.000018	534002 +.329743 169337 +.041026 005860 +.000615 000049 +.000003	+.223368 161951 +.054192 003772 +.000094 000001	.638542 .633048 .601769 .214199 .020148 .000737	.446735 .971705 .650302 .075438 .002811 .000051		

to the same

n	R(A _n)	I(A _n)	R(B _n)	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$
			e = 4.80			
123456789	+.634602 295393 +.176155 083488 +.021747 003584 +.000427 000039 +.000003	350275 +.122806 059204 +.016063 001294 +.000041 000001	548579 +.335071 195611 +.056830 009068 +.001046 000093 +.000007	+.238569 169001 +.075320 007295 +.000224 000004	.700550 .736834 .710445 .321257 .038832 .001743 .000038	.477139 1.014004 .903844 .145907 .006732 .000149 .000002
			d = 5.00			
123456789	+.647848 314772 +.109411 098671 +.029353 005364 +.000702 000070 +.000006	3721201 +.1436653 0683040 +.0227899 0023651 +.0000930 0000018	571449 +.337224 217319 +.076065 012006 +.001727 000168 +.000013 0000008	+.2642578 1719399 +.0971364 0132474 +.0005092 0000096 +.00000001	.7442402 .8619920 .8196482 .4557973 .0709543 .0039050 .0001032	.5285156 1.0316393 1.1656368 .2649485 .0152751 .0004047
		· · · · · · · · · · · · · · · · · · ·	d = 5,20			
1 2 3 4 5 6 7 8 9	+.655355 333992 +.198216 113460 +.038564 007822 +.001122 000122 +.00010	385295 +.167548 077704 +.030702 004101 +.000198 000005	603041 ÷.337640 233723 +.098089 020027 +.002772 000294 +.000025	+.304083 172514 +.117187 022507 +.001097 000025	.770591 1.005286 .932453 .614039 .123056 .008307 .000263	.608167 1.035083 1.406251 .450138 .032914 .001043 .000018
***************************************		-	u <u> </u>			
· · · 3 4 5 6 7 8 9	+.659031 351587 +.208614 127292 +.049312 011128 +.001746 000207 +.000019	391980 +.193066 087830 +.039469 006756 +.000401 000011	634589 +.337767 245123 +.121521 028623 +.004334 000501 +.000046	+.350254 172690 +.133603 035639 +.002248 000061 +.000001	.783960 1.158395 1.053955 .789376 .202690 .016827 .000637	.700507 1.036142 1.603242 .712773 .067445 .002550 .000052 .000006

n	R(A _n)	I(A _n)	$R(B_n)$ $\alpha = 5.60$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$		
123456789	+.660901 366367 +.219141 139817 +.061360 015463 +.002650 000342 +.000034	395445 +.218207 099192 +.048715 010573 +.000774 00026 +.000001	666529 +.339049 252395 +.144405 039837 +.006614 000829 +.000082 000006	 4.406143 174476 +.145495 052454 +.004381 000141 +.000003 	.790889 1.309244 1.190302 .974310 .317200 .032528 .001468 .000036	.812285 1.046853 1.745946 1.049082 .131415 .005939 .000143 .000002		
	₹ = 5.80							
1 2 3 4 5 6 7 8 9	+.663503 377767 +.229959 150933 +.074297 020994 +.003928 000549 +.000060	399693 +.240874 112255 +.058134 015729 +.001431 000058	693132 +.342791 256556 +.164757 053901 +.009863 001338 +.000143 000012	+.463526 179800 +.152929 071768 +.008103 000315 *.000007	.799386 1.445241 1.347065 1.162679 .471879 .060086 .003226 .000092	.927052 1.078802 1.835145 1.435365 .243077 .013214 .000374 .000006		
			d= 6.00					
1 2 3 4 5 6 7 8 9 10	+.667439 385712 +.240929 160746 +.087574 027856 +.005694 000862 +.000102 000009	4079098 +.2590671 1272816 +.0675656 0222684 +.0025275 0001210 +.0000031	712216 +.349887 258740 +.181210 070699 +.014384 002110 +.000243 000023 +.000002	+.5149495 1904138 +.1570456 0916291 +.0141803 0006699 +.0000166 0000003	.8158196 1.5544026 1.5273797 1.3513112 .6680522 .1061552 .0067807 .0002268 .0000044	1.029899 1.142483 1.884547 1.832583 .425410 .028137 .000930 .000018		

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n	R(A _n)	$I(\Lambda_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_{\rm m} ^2/2n+1$
1 2 3 4 5 7 7 8 9 10	•.675601391208 •.251628169503 •.100598036110 •.608326001516 •.000168000019	4243267 +.273303 144178 +.0770344 030065 +.004272 000259 +.000010	724449 +.360463 259182 +.193362 089579 +.020357 003340 +.000457 \$00041 +.000003	◆.555903 207675 +.157898 109951 ◆.023375 001345 +.000041 000001	.848653 1.639921 1.730136 1.540688 .901958 .179406 .014508 .000701	1.111805 1.24605 1.89477 2.19902 .701245 .056478 .002333 .000064
			d = 6.40			
1 2 3 4 5 6 7 8 9	+.6880553 3945339 +.2614515 1774968 +.1128340 0457093 +.0112386 0019849 +.00027281 000031	-0.4515374 +.2826737 1623896 +.0867253 0338393 +.0069042 000472 +.0000167 00000035	7313791 +.3735856 2592393 +.2016315 1092664 +.0286441 0049057 +.0002169 0000686 +.000007	+.5839137 2321544 +.1580089 1251514 +.0361194 0026739 +.0000899 0000018	.9030748 1.6960424 1.9486753 1.7345065 1.1651803 .2899759 .0264307 .0012032 .00003180	1.1678275 1.3929276 1.8961073 2.5030270 1.0835810 .1123037 .0050358 .00013140 .0000021
			4 = 6.60			
1 2 3 6 7 8 9 10 11	+.7038418 3964991 +.2698359 1849934 +.1239216 0943538 +.0152608 0029208 +.0004305 000051 +.000005	4909504 +.2886059 1809507 +.0969281 0482240 +.0106671 0017504 +.0000946 0000009	7347807 +.3873350 2722025 +.2068490 1205923 +.0122982 0072602 +.0010415 0001203 +.000011	+.5996757 2631000 +.1869038 1364647 +.0452442 0050073 +.0001969 0000362	.9819007 1.7316352 2.1714088 1.938562 1.4467192 .4480207 .0491760 .0026031 .0000790	1.1993515 1.5786001 1.9016353 2.7292949 1.564240 .2103069 .0110282 .0000331 .0000063

						m = 1.10
n	$R(A_n)$	$I(A_n)$	$R(B_n)$		$ a_n ^2/2n+1$	$b_n^2/2n+1$
1 2 3 4 5 6 7 8 9 10	+.7205009 3978101 +.2764408 1921570 +.1336735 0680175 +.0204558 0043919 +.0007092 000081 +.000009	5417252 +.2927384 1986616 +.1079501 0578642 +.0157480 0015714 +.0000817 0000024	7360552 •.3994399 2767913 •.2098738 1443316 •.0518784 0105354 •.0016185 0002128 •.000020 000002	+.6060463 2980965 +.1997099 1438952	1.0834504 1.7564308 2.3839389 2.1590019 1.7359247 .6614154 .0879978 .0058839 .0000214	1.2120927 1.7885791 1.9287739 2.8779038 2.1086079 .3760771 .0232423 .0007988 .0000193
			cl = 7.0	00		
1 2 3 4 5 6 7 8 9	+.7472859 3971128 +.2812456 1990074 +.2991639 0798945 +.0266166 0059653 +.0010112	6862527 +.2970001 2143988 +.1200187 0675028 +.0222171 0026715 +.0001508 0000048	7362714 +.4082658 2632856 +.2112440 1570641 +.0611209 0148471 +.0024661 0003261	+.60715573334194 +.16616711480045 +.08877120139028 +.0008255220000258 +.0000005	1.3725054 1.7820006 2.5727854 2.4003743 2.0250832 .9331197 2.1496038 .0108581 .0004360	1.2143114 2.0005164 1.9940057 2.9600907 2.6631374 .6395292 .0462303 .0018547

			r	n = 1.15				
n	R(A _n)	I(A _n)	$R(B_n)$	I(B _n)	10n1 ² /2n+1	\$b _n \$ ² /2n+1		
	_		み = 。	20	200 Ta	•		
1 2	4.0007725 0000010	0000004	0000033		.000000796			
		1	A=.	40	17.			
2	♦. 0060874 0000318	-,0000247	0001082 +.0000003		.000049407 .000000007	.000000016		
			Э = ,	,60	40.4			
1 2 3	+.0199873 0002360 +.0000016	0002664	0008038 +.0000046	+ •0000004	.00053275 .00000040	. 09000086		
	>= .80′							
1 2 3	+.0454086 0009610 +.0000118	0013759 +.0000011	0032903 +.0000336 0000002	3. 0000072	.0027~18 .0000067	.0000144		
-		*	a # :	1.60				
1 2 3 4	+.0834319 0028085 +.0000541 0000007	0046550 +.0000095	0096852 +.0001551 0000017	4. 0000625	.0093101 .0000568	.0001251		
3	9		ス =	1.20		2 .		
1 2 3 4	+.1325956 0066329 +.0001853 0000032	0118141 +.0000528	0230825 +.0005335 0000087	4.0003553	.0236282 .0003168 .0000007	.0007105 .0000021		
			メ = :	1.40				
1 2 3 4	+.1887748 0134807 +.0005172 0000123	÷.0241459 ÷.0002181 0000005	047407 9 +.0014980 0000334 +.0000005	+.0014998 0000027	.0482919 .0013087 .0000055	.0029997 .0000161		

n	R(A _n)	$I(A_n)$	$R(B_n)$	$I(B_n)$	1.2n12/2n+1	$16n1^2/2n41$	
			A=]	L . 60			
1 2 3 4 5	+,2461328 0244631 +.0012404 0000391 +.0000008	0415378 0007188 0000026	0869208 +.0036143 0001057 +.0000021	+.0049051 0000157	.0830757 .0043125 .0000316	.0098102 .0000940	
44			λ = :	1.80			
1 2 3 4 5	+.2989930 0405514 +.0026451 0001066 +.0000028	0621750 +.0019780 0000120	1450941 +.0077716 0002890 +.0000075	+.0141687 0000724	.1243501 .0118680 .0001439 .9000005	.0283374 .0004349 .0000017	
			A=;	2,00			•
1 2 3 4 5	+.3436450 0622928 +.0051343 0002577 +.0000087	0833606 +.0046828 0000451 +.0000002	2226271 +.0152357 0007024 +.0000228 0000005	+.0338037 0002786 +.0000008	.1667211 .0280967 .0005423 .0000030	.0676073 .0016718 .0000101	
			よ =2	2,20			•
1 2 3 4 5	+.3791316 0894943 +.0092496 0005659 +.0000234	1028839 +.0097245 0001467 +.0000007	3150477 +.0276726 0015558 +.0000612 0000018	+.0693790 0009201 +.0000041	.2057679 .0583474 .0017604 .0000142	.1387580 .0055211 .0000497 .0000002	
			み =;	2,40			•
2 3 4 5 6	+.4069598 1210008 +.0155137 0011464 +.0000568 0000020	1200129 +.0179564 0004129 +.0000029	4119027 +.0470942 0031645 +.0001495 0000051 +.0000001	+.1232336 0026700 +.0000171	.2400258 .1077382 .0049545 .0000584 .0000002	.2464672 .0160199 .0002060 .0000010	
A ■ 2,60							
1 2 3 4 5 6	+.4303081 1547881 +.6246462 0021678 +.0001273 0000053	1357240 0298182 0010432 +.9000104	4999669 0755575 0060348 +.0003364 0000137 +.0000004	+.1909534 0069080 +.0000624	.2714481 .1789091 .0125182 .0002089 .0000010	.3819069 .0414479 .0007493 .0000050	

						m = 1.15	
D.	$R(A_n)$	$1(\mathbf{A}_n)$	$R(B_n)$	I(B _n)	n.2/2n+1	$b_n i^2/2n+1$	
			スロ	2.80			
1 2 3 4 5 6	+.4532055 1882662 +.0372045 0038633 +.0002658 0000130	1524175 +.0449585 0023826 +.0000331 0000002	5693612 +.1144647 0108639 +.0007058 0000335	+.2618117 0160310 +.0002024 0000011	.3048351 .2697511 .0285913 .0006534 .0000057	.5236234 .0961860 .0024288 .0000221 .0000012	
			à. = 3	3.00			
1 2 3 4 5 6 7	+.4797329 2192828 +.0535566 0065372 +.0005216 0000296 †.0000013	1734965 •.0623699 0049593 •.0000950 0000007	6172982 \$.1635128 0185937 +.0013933 0000764 +.0000032	+.3240387 0334244 +.0005933 0000043	.3469929 .3742194 .0595112 .0018997 .0000222	.6480774 .2005462 .0071192 .0000863 .0000010	
₹ = 3 , 20							
1234567	+.513075 246465 +.073688 010564 +.000969 000063 +.000003	202958 +.080711 009462 +.000246 000002	646696 +.219296 030414 +.002608 000164 +.000008	+.370152 062378 +.004590 000015	.405916 .484266 .113541 .004963 .000077	.740305 .374270 .019081 .000302 .000002	
			メニ	3.40			
1 2 3 4 5 6 7	+.554307 269551 +.097026 016378 +.001717 000128 +.000007	244784 +.098935 016611 +.000597 000008	662542 +.275145 047690 +.004659 000332 +.000018 0000007	+.398520 103767 +.003925 000048	.489568 .593612 .199337 .011938 .000241 .000002	.7970390 .622599 .047104 .000965 .000009	
			એ 🕿	3,60			
1 2 3 4 5 6 7	+.601267 289214 +.122392 024437 +.002913 000245 +.000015	301694 +.116723 026922 +.001331 000023	669497 +.323418 071707 +.007984 000641 +.000039 000002	+.411955 153966 +.008952 000142 +.000001	.603389 .700338 .323069 .026620 .000694 .000008	.8239101 .923794 .107424 .002834 .000034	

CONTRACTOR SECTION

n	$R(A_n)$	I(An)	$R(B_n)$	$I(B_n)$.ant. ² /2n+1	$b_{n}^{2/2n+1}$
			A#3	8.80		
1 2 3 4 5 6 7 8	+.648461 306685 +.148185 035165 +.004754 000450 +.000032 000002	373173 +.134611 040449 +.002765 000062 +.0000005	÷.671373 ÷.359225 103127 +.013177 001185 +.000081 000004	+.415697205554+.018840000386+.000004	.746347 .807668 .485383 .055300 .001850 .000027	.831395 1.233322 .226082 .007724 .000115 .0000009
			大三 A	4.00		
1 2 3 4 5 6 7 8	+.6890654 3233447 +.1727533 0488510 +.0074893 0007929 +.0000622 0000037	4538769 4. 1538754 0566651 4. 0053672 0001530 4. 0000020	6715099 +.3822585 1410604 +.0232568 0021030 +.0001599 0000094 +.0000004	+.4159724 2508669 +.0363797 0012052 +.0000120	.9077538 .9232523 .6799810 .1073432 .0045910 .0000853	.8319447 1.5052012 .4365568 .0241036 .0003619 .0000035
			À=1	4.20		
1 2 3 4 5 6 7 8	+.718352 340320 +.194840 065515 +.011420 001347 +.000118 000008	534432 +.176265 074625 +.009749 000356 +.000006	673131 +.395389 182193 +.032446 003602 +.000304 000020 +.000001	†.419251 285219 +.063906 002352 +.000035	1.063864 1.057590 .895504 .194988 .010681 .000246 .000003	.838503 1.711316 .766867 .047035 .001062 .000013
			<i></i>	4.40		
123456789	+.735853 358077 +.213848 084770 +.016893 002212 +.000214 000016 +.0000009	605017 +.203613 093327 +.016580 000780 +.000016	679216 +.402138 221025 +.048505 005973 +.000556 +.000040 +.000002	1.431936 307599 †.101358 005290 †.000097 000001	1.210033 1.221676 1.119922 .331592 .023399 .000664 .000009	.863871 1.845592 1.216294 .105808 .002920 .000042 .0000003

n	R(A _n)	I(A _n)	R(B _n)	I(B _n)	1an12/2n+1	1b _n 1 ² /2n+1		
			3 ≖ /	4.60				
123456789	+.744482 376071 +.229831 105751 +.024275 003522 +.000376 000031 +.000002	659189 +.237274 112092 +.026401 001614 +.000040 000001	691707 +.405204 252074 +.070056 009616 +.000982 000078 +.000005	★ 460101 319615 †.144942 011184 †.000252 000003	1.318377 1.423643 1.345107 .528016 .048425 .001684 .000030 .0000003	.920201 1.917689 1.739303 .223688 .007570 .000131 .000001		
			a=.	4.80				
1 2 3 4 5 6 7 8 9	+.747776 392700 +.243284 127193 +.033906 005449 +.000639 000057 +.000004	692290 +.277390 130787 +.039401 003163 +.000095 000002	709364 +.406284 272733 +.097262 015060 +.001630 000147 +.000012	+.506478 324232 +.188293 022108 +.000619 000009	1.384508 1.664339 1.569447 .788019 .094878 .004030 .000085	1.012956 1.945391 2.259522 .442166 .018587 .000383 .000005		
		***************************************	R =	5,00				
1 2 3 4 5 6 7 8 9	†.749229 405830 †.254856 147691 †.046023 008208 †.001054 000103 †.000008	7160138 \$.3222592 1498289 \$.0552580 0058706 \$.0002178 0000042	730502 +.406450 284077 +.128775 022982 +.002794 000267 +.000020 000001	+.500967 3249636 +.2255638 0404951 +.0014462 0000252 +.0000003	1.4320277 1.9335527 1.7979464 1.1051597 .1761192 .0091483 .0002326 .0000033	1.1601935 1.9497813 2.7067655 .8099021 .0433859 .0010597 .0000149		
	-3 ≈ 5,20							
1 2 3 4 5 6 7 8	+.749618 413807 +.265093 166064 060644 012057 +.001692 000182	726078 †.368338 170031 +.073186 010320 †.000470 000011	745790 +.406566 289176 +.161141 034182 +.004525 000469 +.000040	+.670639 325478 +.253633 067969 +.003214 000066 +,000001	1.452156 2.210030 2.040379 1.463714 .309614 .014520 .000599	1.341279 1.952867 3.043600 1.359382 .096442 .002779 .000046		

n	R(A _n)	I(A _n)	R(B _n)	$I(B_n)$	1.2n12/2n11	b _n .2/2n+1		
	? = 5 _e 40							
1 2 3 4 5 6 7 8	+.749779 416318 +.274235 181625 +.077444 017292 +.002646 000309	731781 +.411276 192347 +.092194 017160 +.000969 000026	749732 +.407438 291015 +.189445 049478 +.007151 000803 *.000722	+.770026 329460 +.272179 103610 +.006802 000165 +.000003	1.463563 2.467656 2.308160 1.843873 .514802 .040702 .001463 .000029	1.540053 1,976759 3.266148 2.072197 .204087 .006941 .000134 .000002		
			~ %	5.60				
1 2 3 4 5 6 7 8 9	749314 415528 +.282086 194233 +.095673 024224 +.004038 000512 +.000051	739853 +.447444 217526 +.111428 026944 +.001908 000061 +.000001	741291 +.409646 291526 +.209615 069430 +.011045 001338 +.000130	+.863960 340498 +.282623 143228 +.013655 000395 +.000007	1.479706 2.684664 2.610315 2.228552 .808307 .080121 .003409 .000080	1.727920 2.042987 3.391475 2.864552 .409657 .016573 .000374		
			<i>∃</i> ⊑	5, 80				
1 2 3 4 5 6 7 8 9	+.749966 &12561 +.288029 204154 +.114197 033144 +.006024 000827 +.000089	757183 +.475013 245746 +.130415 039911 +.003590 000136 +.000003	725359 +.413040 291632 +.220665 093782 +.023060 002176 +.000228	↑.944067 361814 ↑.287162 181044 +.025802 001727 ↑.000018	1.514366 2.850078 2.948957 2.608304 1.197319 .150807 .007590 .000208 .000003	1.881337 2.170881 3.445949 3.620885 .774071 .072561 .000990		
			メ =	6.00				
123456789	+.748976 409410 +.291261 211824 +.131713 044246 +.008798 001303 +.000152	7891850 +.4940932 2762933 +.1491342 0558078 +.0064597 0002893 +.0000072	709054 †.416132 291647 †.224653 120740 †.024715 003460 †.000391 000036	 ♦.9944230 −.3955577 †.2882429 −.2125086 †.0453733 −.0019862 †.0000447 −.0000006 	1.578370 2.964559 3.315520 2.982684 1.674235 .271306 .016199 .000518	1.988846 2.373346 3.458914 4.250171 1.361199 .083421 .002503 .000046		

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n	$\mathtt{R}(\mathtt{A}_{\mathbf{n}})$	I(A _n)	R(B _n)	I(B _n)	16;1 ² /2ntJ.	Tb _n 12/2m-1	
	· *= 6 ,20						
1 2 3 4 5 6 7 8 9	+.744526 406921 +.291235 217640 +.147076 057531 +.013011 001726 +.000252 000025	840450 \$.506255 307524 +.167922 073882 \$\frac{1}{1091} 000633 \$\frac{1}{1000013}	697112 4.415925 291648 †.224745 146642 †.035795 005522 †.000375 000064 ‡.000005	+1.026651 441523 +.288365 235715 +.073300 004197 +.000114 000001	1,680899 3.037528 3.690293 3.358431 2.216451 .465805 .035475 .001230 .000027	2.053301 2.649136 3.460377 4.714302 2.199003 .176254 .006427 .000130	
			<i>∂.</i> = 6	.40			
1 2 3 4 5 6 7 8 9 10	+.732536 405148 +.288083 221817 +.159594 072679 +.017659 003032 000409 000044	910907 513961 337250 +.187288 093107 +.018128 001169 +.000039 000001	690884 +.409072 291662 +.223501 167047 +.050588 008231 +.001064 000113 +.000010	↓1.041855 −	1.821815 3.083765 4.046997 3.745764 2.793194 .761373 .065482 .002805 .000071	2.083710 2.975153 3.480403 5.019208 3.233783 .357068 .014176 .000345 .000005	
			み=	6,60			
1 2 3 4 5 6 7 8 9 10 11	+.7088691 4035918 +.2827630 2243329 +.1692918 0888300 +.0242863 0044891 +.0006490 000076 +.900007	9949585 †.5202265 3631827 +.2076862 1129671 \$.0280320 0022204 \$.00008538 0000020	6890161 †.39/.2581 2916413 +.2223119 17292398 +.0692709 0123452 +.0017004 6003243 +.000018	+1.0462376 5514690 + .2955089 2596757 + .1448078 01636833 + .0005702 0000122 + .0000005	1.9899169 3.1213602 4.3581927 4.1537239 3.3890122 1.1773432 .1243452 .0061474 .0001795	2.0924753 3.3088142 3.5461073 5.19351476 4.3442331 .6874701 .0319316 .00088177 .0000448	
	み = 6.80						
1 2 3 4 5 6 7 8 9 10 11	+.6726425 4015240 +.2764157 2249593 +.1758105 1052949 0327222 0065233 +.0010746 000121 +.000014	-1.0817411 + .5279750 3847461 + .2292820 1313546 + .04134135 00405895 + .0001804 00000543	6909224 +.3739923 2912236 +.2216522 1832380 +.0915117 0181910 +.0026654 0003421 +.000031 000003	+1.0496553 6003535 +.3077363 2636689 +.1774224 0299546 +.0012412 0000301 +.0000006	2.1634821 3.1678503 4.6169531 4.5856406 3.9406377 1.7363365 .2273015 .01298620 .0004923	2.0993106 3.6021207 3.6928358 5.2733774 5.3226712 1.2580925 .0695072 .0021666 .0000499	

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1.1	-	.1 -	1 -,

n	R(A _n)	$I(A_n)$	R(B _n)	$I(B_n)$	$\frac{1}{2} \frac{1}{2} \frac{2n+1}{2}$	20 _n 1 ² /2n+1
			シニ り	7.0		
123456789	+.6285130 3978455 +.2704281 2234012 +.18017500 1203802 +.0431296 0093126 +.0015379	-1.1592327 + .5404806 40092820 + .2517753 1494500 + .0575001 0071346 † .0003679 0000112	6875103 +.3530796 2894168 +.2214531 1821698 +.1147278 0263282 +.0041026 0005271	†1.0497159 6379039 † .3278239 2647933 † .2039558 0508929 ‡ .0026135 0000713 † .0000013	2.3184653 3.2428848 4.8111384 5.0355065 4.4834996 2.4150056 .3995397 .0264872 .0010083	2.0994317 3.8274236 3.9338864 5.2958651 6.1186730 2.1375003 .1463681 .0051342 .0001184

n	$R(A_n)$	$I(A_{\underline{n}})$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$	
			o(= ,	.20			
1. 2.	+.0010193 0000013	0000007	0000047		.0000013852		
			< = .	.40			
1.	+.0080514 0000418	0000431	0001479		.0000864		
			£ =	•60			
1. 2. 3.	+.0265430 0003097 +.0000021	0004698	0011017 +.0000062	+.0000008	.0009396 .0000007	.0000016	
******			£ =	.80			
1. 2. 3.	+.0606542 0012637 +. 0000154	0024486 +.0000023	0045282 +.0000461	+.00001367	.0048972 .0000138	.0000273	
			£ =	1.00			
1. 2. 3.	+.1122570 0037031 +.0000708	0084487 +.0000165	0134095 +.0002129 0000024	+.0001199	.0166885 .0000987 .0000001	.0002398 .0000003	
-	< = 1.20						
1. 2. 3. 4.	+.1771886 0087766 +.0002431 0000042	0212311 +.0000924 0000001	0322122 +.0007347 0000119	+.0006921 ~.000 009 6	.0424621 .0005547 .0000012	.0013841	

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m = 1.20

n	$R(A_n)$	I(A _n)	R(B _n)	I(B _n)	$ a_n ^{2/2n+1}$	$ b_n ^2/2n+1$		
			d =	1.40				
1. 2. 3. 4.	+.2508865 0179149 +.0006796 0000162	0432073 +.0003853 0000008	0667864 +.00 20701 0000458 +.0000007	+.0029795 0000051	.0864145 .002 3119 .0000095	.0059591 .0000308		
			L =	1.60				
1. 2. 3. 4.	+.3237824 0326660 +.0016338 0000512	0734906 +.0012825 0000046	1236213 +.0050258 0001455 +.0000030	+,0102583 -,0000303	.1469811 .0076947 .0000549	.0205166 .0001819 .0000004		
1. 2. 3. 4.	+.3881070 0543947 +.0034947 0001398	1032267 +.0035658 0000209	2076454 +.0108849 0003992 +.0000104	+.0293174 0001422 +.0000003	.2164534 .0213949 .0002512 .0000098	.0586348 .0008532 .0000033		
, maring			L =	2.00				
1. 2. 3. 4. 5.	+.4399485 0838183 +.0068094 0003541 +.0000114	1425913 +.0085177 0000795 +.0000003	3177400 +.0215320 0009744 +.0000314	+.0706317 0005567 +.0000016	.2851827 .0511060 .0009540 .0000055	.1412634 .0033404 .0000195		
	∠ = 2.20							
1· 2· 3· 4· 5·	+.4796734 1204424 +.0123250 0007451 +.0000306	1734468 +.0177873 0002613 +.0000012	4415963 +.0395324 0021693 +.0000846	+.1437882 0018796 +.0000080	.3468936 .1067239 .0031260 .0000246 .0000001	.2875764 .0112777 .0000968 .0000004		

m	=	1.	.20

n	$R(A_n)$	I(A _n)	R(B _n)	I(B _n)	$\left a_{n}\right ^{2}/2n+1$	$ b_n ^2/2n+1$			
	∠ = 2.40								
1. 2. 3. 4. 5.	+.5106508 1621684 +.0207822 0015134 +.0000745	2006953 +.0328535 0007412 +.0000051	5568430 +.0680369 0044405 +.0002071	+.2475801 0055924 +.0000338	.4013905 .1971212 .0088944 .0001018 .0000004	.4951601 .0335541 .0004057 .0000017			
			<i>c</i> ∠ = 2	.60					
1. 2. 3. 4. 5. 6.	+.5377353 2055444 +.0331983 0028712 +.0001673 00000	2271795 +.0542268 0018955 +.0000183	6434404 +.1102141 0085355 +.0004678 0000183	+.3646631 0148409 +.0001249 0000005	.4543589 .3253608 .0227462 .0003664 .0000023	.7293261 .0890451 .0014990 .0000097			
	8		£ = 2	.80					
1. 2. 3. 4. 5. 6.	+.5659824 2465851 +.0503774 0051374 +.0003499 0000170	2578983 +.0807993 0043836 +.0000587 0000003	6952860 +.1674728 0155156 +.0009859 0000464 +.0000016	<pre>%.47104680351382 +.00041290000022</pre>	.5157968 .4847959 .0526032 .0011732 .0000100	.9420936 .2108291 .0049557 .0000432 .0000002			
	∠ = 3.00								
1. 2. 3. 4. 5. 6.	+.5995284 2824961 +.0727883 0087354 +.0006882 0000388	-,2993720 +.1103872 0092285 +.0001696 0000013	7230368 +.2366234 0268623 +.0019573 0001061 +.0000044	+.5507066 0737082 +.0012396 0000085	.5987439 .6623233 .1107423 .0033927 .0000387 .0000002	1.101413 .4422492 .0148755 .0001703 .0000009			

				m	= 1.20		
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	I(B _n)	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$	
			d = 3	3.20			
1. 2. 3. 4. 5. 6. 7.	+.6392792 3121161 +.1002098 0141968 +.0012827 0000830 +.0000040	3577984 +.1406329 0177553 +.0004483 0000045	7346135 +.3071762 0445043 +.0036893 0002282 +.0000107 0000004	+.5988611 1351460 +.0034154 0000302 +.0000001	.7155968 .8437974 .2130636 .0089667 .0001346 .0000009	1.197722 .8108760 .0409843 .0006050 .0000042	
			d=3	3.40		u)	
1. 2. 3. 4. 5. 6. 7.	+.683391 335964 +.131398 022149 +.002280 000168 +.000009	441008 +.170213 031275 +.001093 000014	739420 +.364510 070653 +.006646 000464 +.000025 000001	+.624468 214816 +.008687 000098	.882016 1.021283 .375298 .021856 .000425 .000004	1.248936 1.288899 .104240 .001963 .000018	
			≪=:	3.60			
1. 2. 3. 4. 5. 6. 7. 8.	+.721914 355510 +.164070 033266 +.003884 000323 +.000020 000001	546677 +.199357 050522 +.002473 000041	740682 +.399445 107113 +.011504 000901 +.000054 -,000003	+.632144 298114 +.020381 000294	1.093354 1.196142 .606270 .049454 .001234 .000014	1.264288 1.788686 .244567 .005886 .000066	
1. 2. 3. 4. 5. 6. 7.	+.745344 372380 +.195405 048160 +.006371 000595 +.000041 000002	666563 +,229733 0751339 +.005215 000111 +.000001	740785 +.413992 153594 +.019218 001675 +.000113 000006	+.632791 369532 +.043718 000822 +.000007	1.333125 1.378400 .901607 .104291 .003322 .000048	1.265581 2.217191 .524622 .016445 .000230 .000002	

					m=	1.20	
n	$R(A_n)$	I(A _n)	$R(B_n)$	I(B _n)	$\left a_{n}\right ^{2/2n+1}$	$ b_n ^{2/2n+1}$	
			$\mathcal{S}_{i} = \mathcal{I}_{i}$	4.00			
1. 2. 3. 4. 5. 6. 7.	+.749227 387681 +.222943 067188 +.010095 001052 +.000082	784048 +.263976 103609 +.010266 0002781 +.000012	741307 +.416641 205117 +.031075 002995 +.000224 000013	+.636140 421222 +.084311 002156 +.000024	1.568097 1.58386 1.24331 .205313 .008345 .000150 .000001	1.272279 2.527330 1.011732 .043126 .000734 .000006	
√ = 4.20							
1. 2. 3. 4. 5. 6. 7.	+.738112 401410 +.245332 090162 +.015499 001792 +.000155 000010	882971 +.304948 133927 +.018855 000656 +.000010	743559 +.415058 251186 +.048679 005175 +.000427 000027 +.000001	+.651922 453247 +.143426 005329 +.000073	1.765942 1.829686 1.607125 .377098 .019689 .000436 .000005	1.303844 2.719480 1.721117 .106580 .002192 .000025	
			d = .	4.40			
1. 2. 3. 4. 5. 6. 7. 8.	+.721417412025 +.262453116064 +:023097002957 +.000283000021 +.000001	955078 +.354645 164436 +.032246 001461 +.000028	747564 +.413279 280934 +.073685 008672 +.000786 000056 +.000003	+.689600 469688 +.213276 012408 +.000205 000002	1.910156 2.127871 1.973228 .644916 .043821 .001186 .000017	1.379201 2.818129 2.55931 .248151 .006158 .000084	

						m = 1.20			
n	R(A _n)	$I(A_n)$	$R(B_n)$	$I(B_n)$	$a_n^{2/2n+1}$	$ b_n ^2/2n+1$			
			d. =	4.60					
1. 2. 3. 4. 5. 6. 7. 8. 9.	+.706839 416649 +.274963 142951 +.033443 004732 +.000498 000040 +.000003	+1.000756 + .412783 194450 + .051247 003076 + .000072	749967 +.412458 291434 +.106924 014136 +.001397 000110 +.000007	+.756956 475740 +.280014 027029 +.000546 000006	2.001513 2.476699 2.333405 1.024948 .092281 .003040 .000052	1.513912 2.854440 3.360170 .540588 .016374 .000264			
	d = 4.80								
1. 2. 3. 4. 5. 6. 7. 8. 9.	+.697510 412462 +.283789 168311 +.047034 007365 +.000850 000076 +.000005	-1.025644 + .475710 224336 + .075680 906136 + .000175 000003	742431 +.412330 288724 +.146523 022462 +.002408 000207 +.000014	+.856282 476623 +.332996 054249 +.001361 000019	2.051288 2.854264 2.692031 1.513599 .184084 .007366 .000151	1.712564 2.859738 3.995950 1.084983 .041439 .000787 .000009			
1. 2. 3. 4. 5. 6. 7. 8. 9.	+.692725 398916 +.289375 189811 +.064138 011173 +.001407 000137 +.000010	-1.037458 + .536987 255182 + .104196 011585 + .000404 000007	714228 +.412212 281160 +.185764 034831 +.004041 000377 +.000028 000002	+.978862 477431 +.369246 098048 +.003339 000053	2,074915 3,221924 3,062182 2,083927 ,347559 ,016962 ,000414 ,000006	1.957725 2.864587 4.430953 1.960961 .100171 .002216 .000030			

) -			m = 1.20	
n	R(A _n)	$I(A_n)$	R(B _n)	I(B _n)	$\left a_{n}\right ^{2/2n+1}$	$\left b_{n}\right ^{2}/2n+1$	
			√ √ =	5.20			
1. 2. 3. 4. 5. 6. 7. 8.	+.689734 378871 +.291647 206115 +.084522 016545 +.002268 000241 +.000020	-1.044562 + .590066 288257 + .134769 020646 + .000887 000019	661169 +.411314 274234 +.214225 052623 +.006614 000667 +.000054	+1.104055 483236 +.390991 156206 +.007714 000141 +.000001	2.089124 3.540398 3.459086 2.695373 .619376 .037250 .001075 .000018	2,208111 2,899417 4,691891 3,124114 ,231440 ,005938 ,000093	
- 							
1. 2. 3. 4. 5. 6. 7. 8. 9.	+.684952 357244 +.289831 217095 +.108248 023933 +.003564 000411 +.000038	-1.055518 + .631114 324341 + .165880 035368 + ,001862 000047	592842 +.408448 269957 +.224914 078446 +.010583 001149 +.000102 000007	+1.209389 499014 + .402087 218787 + .017631 000362 + .000005	2.111035 3.786683 3.892093 3.317606 1.061061 .078196 .002656	2.418777 2.994085 4.825046 4.375736 .523929 .015216 .000276 .000003	
			ج ج	5.60			
1. 2. 3. 4. 5. 6. 7. 8.	+.674168 338378 +.282795 222997 +.130130 033821 +.005472 000682 +.000068	-1.078629 + .659795 363057 + .195043 054193 + .003741 000112 + .000002	527089 +.401230 268192 +.220125 107854 +.016592 001928 +.000184 000014	+1.283551 529031 +.406307 271585 +.035081 000892 +.000014	2.157257 3.958769 4.356681 3.900860 1.625789 .157115 .006262 .000142 .000002	2.567102 3.1741.85 4.875689 5.431692 1.052438 .037462 .000777	

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		,,			m = 1.20			
n	$R(A_n)$	I(A _n)	$R(B_n)$	I(B _n)	a_n $2/2n+1$	$ b_n ^2/2n+1$		
			£ =	5.80				
1. 2. 3. 4. 5. 6. 7. 8. 9.	+.6519197324389 +.279781224994 +.150926046630 +.008153001105 +.000118000010	-1.120811 + .678167 402517 + .223313 079254 + .0071.91 000251 + .000005	477606 +.385355 267884 +.208150 141504 +.025510 003164 +.000324 000027 +.000002	+1.328267 575136 + .407025 310432 + .066768 002117 + .000037	2,241622 4.069005 4.830209 4.466265 2.377629 .302059 .014029 .000373 .000006	2.656533 3.450819 4.884296 6.203643 2.003028 .088911 .002094 .000032		
∠(= 6,00								
1. 2. 3. 4. 5. 6. 7. 8. 9.	+.611333 315086 +.251298 223533 +.167261 062541 +.012108 001750 +.000201	-1,184434 +,689305 -,439716 +,250647 -,108268 +,013200 -,000548 +,000013	-,448656 +,355481 ,267731 +,196110 ,169631 +,038444 ,005086 +,000558 -,000051 +,000004	+1 351050 634024 + .407381 335300 + .113757 004851 + .000097 000001	2.368870 4.135832 5.276592 5.012943 3.248034 .554388 .030712 .000934 .000017	2.702101 3.804145 4.888570 6.705994 3.412720 .203740 .005410 .000095		
			· - =	6.20				
1. 2. 3. 4. 5. 6, 7. 8, 9.	+.543776 309376 +.229477 218752 +.177873 078231 +.019055 002712 +.000334 000034	-1.266535 + .695743 471694 277656 138924 + .021229 001362 + .000031	436447 +.310442 266373 +.187332 182842 + 052910 009177 +.000937 000091 +.000007	+1,359929 -,694582 +,410472 -,349626 +,169922 -,009325 +,000315 -,000004	2.533069 4.174560 5.660324 5.553130 4.167729 .891617 .076300 .002242	2.71,9859 4.167492 4.925664 6.992519 5.097668 .391660 .017629 .000268		

					m	= 1.20	
n	$R(A_n)$	$I(A_n)$	R(B _n)	I(B _n)	$\left a_{n}\right ^{2/2n+1}$	$ b_n ^2/2n+1$	
			2 =	6.40			
1. 2. 3. 4. 5. 7. 8. 9. 10.	+.453669 302528 +.207365 210419 +.182772 101516 +.024774 004119 +.000546 000059 +.000005	-1.347230 + .703177 496775 + .304679 168998 + .037947 002311 + .000072 000001	434109 +.252222 262238 +.182524 178805 +.080557 012439 +.001541 000160 +,000014	+1.361596 748322 + .419341 356567 + .222901 022619 + .000579 000010	2.694461 4.219060 5.961299 6.093585 5.069952 1.593786 .129435 .005176 .000127 .000002	2.723191 4.489933 5.032089 7.131347 6.687022 .949986 .032423 .000724 .000011	
L = 6.60							
1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	+.342667293449 +.187700198152 +.182819121331 +.034407006142 +.000870000100 +.000010	-1.399838 + .712468 514911 + .331586 197053 + .058688 004495 + .000160 000004	-,433351 +.195928 253120 +.180581 164609 +.108969 018985 +.002486 000275 +.000025 000002	+1.362133 784393 +.436579 359222 +.264049 044866 +.001352 000026	2.799677 4.274812 6.178937 6.631730 5.911579 2.464914 .251729 .011513 .000322 .000005	2.724266 4.706363 5.238953 7.184432 7.921467 1.884382 .075735 .001884 .000032	
***************************************			d =	: 6.80			
1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	+.243168 277890 +.171952 181966 +.179078 138034 +.046744 009000 +.001637 000161 +.000019	-1.459485 + .727131 527255 + .357337 222605 + .084777 008422 + .000343 000010	425754 +.150863 316384 +.180262 148296 +.136204 028521 +.003932 00049 +.0000/4 0000/4	+1.367441 805062 +.463262 359650 +.291126 0812/9 +.003072 000666 +.000001	2.918970 6.327061 7.146742 7.146742 6.678146 3.560624 .471649 .024739 .000894	2.734882 5.559148 7.193011 7.193011 8.733778 3.413735 .172039 .004730 .000103	

					1	m = 1.20
n	$R(A_n)$	I(A _n)	$R(B_n)$	I(B _n)	$\left a_n \right ^2 / 2n + 1$	$ b_n ^2/2n+1$
			L	= 7.00		
1. 2. 3. 4. 5. 6. 7. 8,	+.160708 251987 +.160154 162560 +.172345 149384 +.061875 012972 +.002081	-1.482579 + .748500 535429 + .380560 245848 + .114320 015150 + .000714 000021	402748 +.121259 206913 +.180079 135117 +.152822 042093 006139 000761	+1.382688 815298 + .497230 359894 ÷ .307246 130341 + .006787 000160 + .000003	2.965159 4.491003 6.425149 7.611208 7.375452 4.801443 .848402 .051471	2.765376 4.891791 5.966763 7.197879 9.217389 5.474315 .380055 .011499

						m = 1.25
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$b_n l^2/2n+1$
			d = .20)		
1 2	+.0012592 0000016	0000011	0000058		.000002111,	
			مز= ،40)		
1 2	+.0099753 0000512	0000663	0001893 +.0000005		.000132690 .000000019	•000000036
			d= .60)		
1 2 3	+.0330145 0003809 +.0000026	-,0007272 +.0000001	0014150 +.0000081	+•00000114	•0000010	•0000027
			ડ = .80)		
1 2 3	+.0756228 0015567 +.0000189	0038228 +.0000029	0058424 +.0000591 0000004	+.0000228	.0076445 .0000174	.0000455
	s.		d = 1.0	00		
1 2 3 4	+.1396914 0045739 +.0000869 0000010	0131240 +.0000251	0174714 +.0002739 0000031	+.0002035	•0262479 •0001507	.0004071 .0000005
			al = 1.2	20		
1 2 3 4	+,2213999 -,0108783 +,0002987 -,0000052	-,0334234 +,0001420 -,0000002	0421830 +.0009482 0000153	+.0011872 0000011	.0668468 .0008522 .000001.8	.0023744 .0000065
			d = 1.i	†O		
1 2 4	+.3112456 0223002 +.0008366 0000199	-,0676319 +,0005972 -,0000012	0883522 0026842 0000590 +.0000009	+.0052223 0000086	•1352639 •0035831 •0000144	.0104445 .0000518 .000001

						m = 1.25		
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$		
			d = 1,60					
1 2 3 4 5	+.3967915 0408540 +.0020160 0000629 +.0000013	1135595 +.0020077 0000070	1651305 +.0065563 0001880 +.0000038	+.0184045 0000520	,2271190 .0120462 .0000836	.0368091 .0003095 .0000009		
-	• ,		d = 1,80)	2			
1 2 3 4 5	+,4685821 -,0683237 +,0043254 -,0001718 +,0000045	1643970 0056399 0000322	2784907 +.0143124 0005173 +.0000134 0000002	+ .0536216 0002459 + .0000004	.32879b1 .0338396 .0003859 .0000013	.10724313 .0014753 .0000055		
	ed = 2,00							
1 2 3 4 5	+.5235444 1055482 +.0084603 0004168 +.0000140	-,2129701 +,0135901 -,0001227 +,0000004	-,4217113 +,0285958 -,0012679 +,0000405	÷ 1297907 • 10009824 • 10000028	.4259401 .0815408 .0014727 .0000077	.2595814 .0058945 .0000331		
			d= 2,20)				
1 2 3 4 5	+.5642045 ,1514976 +.0153844 ,0009190 +.0000376	2558611 +- 0285177 0004060 +- 0000019	5666600 +-0531240 ,0028385 ,0001.095 ,0000031	, 2586789 , 0034005 +,0000138	,513.7222 ,1731065 ,0048723 ,0000375 ,0000001	.51.73577 .0204028 .0001.657 .0000005		
el = 2:40								
123436	+-5959611 2034987 +-0260770 0018718 +-0000916 0000032	-,2946646 +,0526052 ,0011681 +,0000078	6754159 +.0925478 0058512 +.0002691 0000091 +.0000002	+.4239427 0104081 +.0000587 0000001	-5893292 -3156550 •0140169 •0001557 •0000007	.0000032		

						m = 1.25		
n	$R(A_n)$	$I(A_n)$	R(B _n)	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$		
			oi = 2.60)				
1 2 3 4 5 6	+.6248196 2536837 +.0418952 0035628 +.0002060 0000086	3351501 +.0861282 0030246 +.0000282 0000001	7315734 +.1511788 0113471 +.0006103 0000244	+.5847719 0283935 +.0002208 0000008	.6703002 .5167693 .0362954 .0005641 .0000035	1.1695439 .1703607 .0026497 .00001.66 .0000004		
			ર = 2, 80)				
1 2 3 4 5 6	+.6557414;2990850 +.06389680064010 +.00043150000209	3859901 +.1265645 0070851 +.0000901 0000005	7488309 +.2287601 0208550 +.0012927 0000602 +.0000021	+.7081393 0684140 +.0007465 0000037	.7719802 .7593871 .0850217 .0018214 .0000152	1.4162786 •4104839 •0089586 •0000743 •0000003		
	d = 3.00							
1 2 3 4 5 6 7	+.6905873 3358698 +.0925956 0109378 +.0008508 0000477 +.0000021	4574438 +.1700848 0150885 +.0002660 0000020	7491521 +.3137?40 0365835 +.0025824 0001382 +.0000064	+ • 7356477 - • • 1425188 + • 0023034 - • 0000148	.911,8876 1.0205088 .1810620 .0053203 .0000592 .0000003	1.5712955 .8551130 .0276411 .0002964 .0000016		
			d,= 3.2	0				
1 2 3 4 5 6 7	+.725195 363717 +.127322 017880 +.001590 000102 +.000005	-,558709 +,213390 -,0292575 +,000711 -,000007	746326 +.381999 061487 +.004905 000298 +.000014 0000005	+ 625096 250269 + 606555 000053	1.1171.18 1.28031.2 .351090 .011.232 .000207 .000001	1.650191 1.501613 .078658 .001069 .000007		
			بل، 3 = 3 ولا	0				
1 2 3 4 5 6 7	+.71,7755 381,211 +.165665 028078 +.002837 000207 +.000011	692011 +-255444 051616 +.001759 000022	744669 +.413928 098840 +.008921 000610 +.000032 000001	+.839263 368969 +.017258 000176 +.000001	1.384021 1.532661 .619390 .0351.77 .000658 .000006	1.678527 2.213813 .20709, .003539 .000030		

						m = 1.25		
n	$R(A_n)$	$I(A_n)$	$\mathbb{R}(\mathbb{B}_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$		
			d = 3.60					
12345678	+.743924 399319 +.203629 042457 +.004853 000399 +.000025 000001	845278 +.297691 082849 +.004042 000064	744437 +.413292 150292 +.015625 001190 +.000071 000003	+.841181 469588 +.041703 000543 +.000005	1.690556 1.786144 .994191 .080840 .001927 .000022	1.682363 2.817530 .500435 .010864 .000140 .0000006		
			સ્= 3 . 80					
1 2 3 4 5 6 7 8	+.709457 410167 +.236861 061830 +.008002 000737 +.000051 000003	993249 +.3h3357 121h72 +.008662 000175 +.000002	744158 ÷.378329 211040 +.026476 002227 +.000148 000008 +.0000003	+.843427 538918 +.090342 001563 +.000014	1.986499 2.060141 1.457669 .173241 .005242 .000074	1.686853 3.233505 1.084101 .031264 .000406 .000003		
			d = 4.00					
1 2 3 4 5 6 7 8 9	+.6567014 4161650 +.2623689 0865338 +.0127593 0013070 +.0001011 0000060 +.0000002	-1.112275 +.3962259 1642618 +.0173057 0004445 +.0000055	7421071 +.3834973 2647557 +.0435101 0040151 +.0002946 0000171 +.0000008	+.8585223 5795806 +.1692990 0042470 +.0000439 0000003	2.2245502 2.3773553 1.9711411 .3461152 .0133361 .0002318 .0000021	1.7170446 3.4774835 2.0315881 .0849409 .0013191 .0000118		
	હ_= 4.20							
1 2 3 4 5 6 7 8 9	+.60l;723 398138 +.27936l; 115852 +.019729 00223l; +.000192 000013 +.000007	-1.193634 +.440721 207850 +.032119 001065 +.000016 0000001	73507h +.374329290631 +.069252007008 +.005648000363 +.000019	+.398882 599667 +.267107 010923 +.0001314 000001	2.387267 2.644327 2.494196 .642372 .031939 .000679 .000008	1.797765 3.598002 3.205280 .218450 .004020 .000043		

+.000037

-.000002

.000009

-.000170

+.00001h

						m = 1.25		
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$ a_n ^2/2n+1$	$ b_n ^2/2n+1$		
			≪ = 5.2	20				
123456789	+.513747 237688 +.263639 224634 +.109860 021324 +.002849 000299 +.000025	-1.296410 +.758888 416421 +.212177 036562 +.001476 000030	324490 ÷.356355 210166 +.217202 077169 +.009140 000892 +.000072 000005	+1.426170 632588 +.493903 283723 +.017032 000270 +.000003	2.592821 4.553331 4.997057 4.243540 1.096860 .061997 .001697 .000027	2.852341 3.795531 5.926838 5.674458 .510964 .011345 .000166 .000002		
			a = 5.1	,0				
1 2 3 4 5 6 7 8 9	+•488891 -•202979 +•238497 -•223321 +•136944 -•031140 +•004502 -•000511 +•00046	-1.318758 +.780549 459562 +.252432 061442 +.003165 000076 +.000001	212797 +.334254 206881 +.189062 113139 +.014856 001547 +.000134 000009	+1.469178665435 +.497263346985 +.039074000715 +.000009	2.637515 4.683296 5.514741 5.048650 1.843262 .132937 .004240 .000080	2.938357 3.992608 5.967158 6.939707 1.172222 .036089 .000484		
			d = 5.0	50				
1 2 3 4 5 6 7 8 9	+.439526179130 +.204648215680 +.160810044416 +.006960000852 +.000084000008	-1.357714 +.792863 499486 +.289088 095292 +.006511 000181 +.000003	139114 +.292332 206452 +.157886 152837 +.023727 002622 +.000245 000019	+1.486985 713572 +.497694 385303 +.082081 001830 +.000026	2.715429 4.757178 5.993831 5.781757 2.858762 .273149 .010135 .000221	2,973970 4.281432 5,972326 7,706059 2,462440 .0768143 .001081 .000018		
	ત = 5.80							
1 2 3 4 5 6 7 8 9 10	+.35\\\205 1623\\\5 +.16\\\8\\1 20280\\\\\\177078 061683 +.0105\\\\1 001386 +.0001\\\7 000013	-1.411089 +.800405 532285 +.322445 135850 +.012814 000416 +.00008	100956 +.221169 2058?7 +.134139 180251 +.037257 004348 +.000434 000036 +.000002	+1.493174769789 +.1,98268405642 +.149858004551 +.000071000001	2.8221 7 9 14.802130 6.387117 6.1418902 14.075506 .538596 .023266 .000586 .000009	2.986348 4.618734 5.979220 8.112851 4.495744 .191160 .003954 .000057		

			-42-			
					. 2	m = 1.25
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$\left a_n \right ^2 / 2n + 1$	$\frac{1}{2}$ /2n+1
			d = 6.	00		
1234567897	+.227266153020 +.124052184976 +.183275082872 +.015666002205 +.000250000023	-1.464738 +.804218 555637 +.353097 178699 +.024058 000919 +.000021	087555 +.133536 202078 +.119738 177856 +.057326 007081 +.000750 000067 +.000005	+1.494872 811356 +.501985 415494 +.227811 011009 +.000187 000002	2.929476 4.825307 6.667646 7.061936 5.360958 1.010429 .051483 .001482 .000027	2,989744 4.868133 6.023820 8.309874 6.834342 .462375 .010489 .000172 .000002
			d = 6.	20		
1 2 3 4 5 6 7 8 9 10	+.069775141498 +.087329161992 +.179783106624 +.023758003436 +.000419000042	-1.496747 +.808572 569953 +.381152 219238 +.042590 002126 +.000050 000001	085958 +.038856 191498 +.112850 148715 +.085389 011719 +.001270 000121 +.000010	+1.495058831517 +.511662419653 +.290548025689 +.000514000007	2.993494 4.851429 6.839433 7.623046 6.577153 1.788789 .119080 .003600 .000075	2.990116 4.989106 6.139944 8.393060 8.716442 1.078921 .028767 .000492 .000006
			e = 6.	40		
1 2 3 4 5 6 7 8 9 10 11	+.088004 -,123631 +.057711 133849 +.168852 -,129660 +.032752 005254 +.000684 000073 +.000007	-1.494819 +.814569577567 +.405858254749 +.070267004067 +.000117000002	083064 +.039172 169567 +.110707 112485 +.119472 017938 +.002108 000214 +.000018 000001	+1.495386 831488 +.528978 420880 +.328103 056387 +.001207 000019	2.989638 4.887416 6.930802 8.117157 7.642464 2.951202 .227728 .008423 .000199	2,990772 4,988928 6,347730 8,417598 9,843086 2,368260 067577 0001356

			-4:3-			
	- (-)					m = 1.25
n	$R(A_n)$	$I(A_n)$	$R(B_n)$	$I(B_n)$	$\left(a_{n}\right)^{2}/2n+1$	$ b_n ^2/2n+1$
			d = 6.6	0		
1 2 3 4 5 6 7 8 9 10	+.215631 093498 +.035673 098517 +.152904 147120 +.045973 007898 +.001093 000125 +.000013	-1.468334 +.822708 581144 +.427285 284484 +.106730 008138 +.000264 000006	065707 +.091524 130959 +.108654 083168 +.148331 028001 +.003438 000369 +.000034 000003	+1.497116823157 +.552280422026 +.31,6717110614 +.002960000050 +.000001	2.936667 4.936245 6.973722 8.545709 8.534511 4.482650 .455712 .019043 .000458	2.994232 4.938943 6.627358 8.440529 10.401515 4.645770 .165746 .003604 .000058
		and the second s	d = 6.8	0		
1 2 3 1, 5 6 7 8 9 10 11	+,3010680\(\begin{align*}0\(\beta\)711 +.0\(19732\)067232 +.13353915\(\beta\)628 +.06291\(\beta\)0\(168\)\ +.001831000222 +.000031	-1.436919 +.830818 582665 +.439720 308945 +.148325 015697 +.000580 000016	020711 +.120485 072656 +.109647 064142 +.152347 043104 +.005518 000665 +.000067 000066	+1.499714 815533 +.574139 421475 +.355080 181994 +.007126 000129 +.000002	2.873838 4.984910 6.991981 8.794410 9.268354 6.229652 .879019 .041729 .001430	2.999427 4.893199 6.889663 8.429504 10.652406 7.643748 .399047 .009292 .000188
			ci = 7.0	00		
123456789011 12	+.34902? - 021699 +.007244033954 +.1.11455150847 +.082990017026 +.00264300342 +.00036000003	-1.413838 +.827644 583243 +.447423 328898 +.189351 028812 +.001234 000033	063157 063157 132793 00011/1 +.105216 053797 +.125468 064737 +.008742 003601 000321 000008	+1,497336 811606 +.583333 423883 +.358596 245366 +.016685 000324 +.000068	2.827675 4.965866 6.998920 8.948467 9.866929 7.952739 1.613487 .088868 .002979	2.994672 4.869636 7.000000 8.477665 10.757882 10.305366 •934365 .023339 .006160 .000006

m = 1.30

n	R(A _n)	I(A _n)	R(B _n)	I(B _n)	a_13/2n+1	bn 2/2n+1			
	a = 1.40								
1 2 3 4	+.3691218 0266274 +.0009883 0000234	0971225 +.0008517 0000016	1124070 +.0033424 0000730 +.0000011	+.0084714 0000134	.1942449 .0051102 .0000201	.0169428 .0000804 .0000001			
			d = 1.	60					
1 2 3 4 5	+.4640277 0490077 +.0023864 0000742 +.0000016	1607817 +.0028921 0000098	2121019 +.0082177 0002326 +.0000048	+.0306164 0000810	.3215633 .0173529 .0001172 .0000002	.0612328 .0004863 .0000011			
	d=1.80								
1 2 3 4 5	+.5392457 0822962 +.0051362 0002026 +.0000053	2287380 +.0082080 0000452 +.0000001	3577916 +.0180948 0006435 +.0000165 0000002	+.0908451 0003931 +.0000007	.4574760 .04924830 .0005427 .0000018	.1816903 .0023586 .0000085			
			ત્ર = 2•0	0 .					
1 2 3 4 5	+.5936778 1273756 +.0100844 0004924 +.0000165	2916915 +.0199469 0001744 +.0000005	5296883 +.0365541 0015849 +.0000502 0000012	*.2190291 0016065 +.0000043	.5833830 .1196815 .0020926 ,0000108	.4380582 .0096393 .0000517 .0000001			
d = 2.20									
1 2 3 4 5	+.6325166 1623647 +.0184240 0010877 +.0000443	3469830 •.0420279 0005825 •.0000026	6733694 +.0688018 0035695 +.0001361 0000039	+.4197370 0057197 +.0000218	.6939661 .2521671 .0069898 .0000526	.8394739 .0343181 .0002621 .0000008			

AND A CONTRACTOR

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-46-
                                                                m = 1.30
                                                                  | b_1/2n+1
                                                     Janken+1
                                             1(B<sub>n</sub>)
       R(A_n)
                   I(A_n)
                             R(B_n)
n
                                  a = 2.40
1
      +.5628351
                  -.3990732
                              -.7422366
                                            +.6436669 .7981464
                                                                  1.2847338
2
      -.2417760
                  •.0773210
                              +.1213935
                                            -.0180757 .4639262
                                                                   .1084544
3
      +.0313966
                  -.0016948
                              -.0074154
                                            +.0000943 .0203374
                                                                   .0011314
4
      -.0022212
                  +.0000110
                                                                   .0000050
                               +.0003359
                                            -.0000003 .0002193
      +.0001081
                              -,0000113
                                                       .0000009
      -.0000038
                              +.0000003
                                   소 = 2.60
1
                                                                  1.6454891
      +.6906894
                   -.4576849
                                            +.8227446 .9153698
                               -.7464638
2
                                                                   .3045746
      -.2978610
                                            -.0507624 .7518476
                   +.1253079
                              +.1993118
                                                                   0043424
3
                                            +.0003619 .0533425
      +.0507274
                   -.0044452
                               -.0145244
                                                                    №0000860
4
                   4.0000400
      -.0042418
                               4.0007651
                                            -.0000013 .0007998
                                                                    0000007
5
                  -.0000002
      +.0002432
                               -.0000304
                                                       .0000048
      -.0000100
                               +.0000009
                                   d = 2.80
1
                                                                    1 87534 72
      ÷.7197673
                   -.5392038
                               -.7261395
                                            4.9376736 1.0784076
2
                               +.2961486
                                            -.1235675 1.0877261
                                                                     17414050
      -.3438137
                   +.1812877
3
       +,0777430
                   -.0105520
                               -.0270312
                                            +.0012553
                                                         ,1266236
                                                                     ·0150637
4
       -.0076525
                   +.0001302
                               +,0016294
                                            -.0000059
                                                         .0026035
                                                                     .0001180
S
       +.0005107
                   -.0000007
                               -.0000751
                                                         .0000213
                                                                     .0000005
       -.0000246
                               +.0000026
                                   ペニ 3.00
1
                                                                    2.010042
       ÷.7429048
                   -.6470801
                               -.7053115
                                            +1.005021
                                                         1.294160
2
                                                                    1.498122
       -.3833193
                   +.2533344
                               +.3817446
                                              .2496871 1.520007
3
                                                                     ,0479975
       +.1128950
                   -. 0227351
                               -.0481375
                                               .0039998
                                                          .2728218
                                              <u>.0000239</u>
                                                          .0076837
4
       -.0131429
                   ÷.0003842
                               +.0032775
                                                                     .0004775
                                                                     .0000024
                                            4 ,0000000
5
       +.0010092
                   -.0000028
                               -.0001728
                                                          .0000833
                                                          .0000004
       -.0000563
                               +.0000070
       +.0000027
                               -.0000003
                                   -.797906
                               -.699087
                                             +1.02162
                                                                     2,043241
1
       +.748468
                                                          1.595813
2
                   +.296159
                               +.416517
                                             - .405493
                                                          1.776954
                                                                     2,432956
```

-.399860 3 +.011824 -.082205 .141892 4.154690 -.044401 .532808 ÷.001041 4 380000. -.001753 **-.**021615 **+.006280** .020812 5 **4.**0C1892 -.000009 -.000375 .000293 .000011 6 -.000121 +.000017 .0000002

+,000006

100 m

m = 1.30

				m = 1.30				
n	$R(A_n)$	$I(A_n)$	R(B _n)	$I(B_n)$	lan ² /2n+1	b _n ² /2n+1		
			∝ =	3,40				
1 2 3 4 5 6 7	+.715163 411496 +.198846 034175 +.003387 000245 +.000013	975925 +.351227 078289 +.002610 000047	697131 +.397826 133568 +.011548 000771 +.000040 000002	+1.026602 540545 + .032381 000297 + .000002	1.951851 2.107364 .939472 .052210 .000939 .000008	.2.053205 3.243268 .388574 .005931 .000049 .000000		
	a = 3.60							
1 2 3 4 5 6 7 3	 ★.636417 —.416573 ★.238956 —.052035 ★.005821 —.000474 +.000029 —.000001 	-1.146829 + .407829 124426 + .006100 000092 + .000001	696761 \$.358465 200917 \$.020507 001513 \$.000089 000004	<pre></pre>	2.293659 2.446972 1.493113 .121992 .002773 .000030	2.055065 3.774407 .962869 .018729 .000187 .000001		
೦√ = 3.80								
1 2 3 4 5 6 7 8	 ♦.533567 −.413190 †.269058 −.076208 ♦.009649 −.000876 †.000060 −.000003 	-1.277073 +470379 179073 +.013299 000254 +.000003	692188 +.324995 265774 •.035337 002851 +.000194 000010 •(.0000004)	\$1.038749 677414 \$.171527 002792 \$.000022	2.554146 2.822272 2.148882 .265982 .007623 .000104 .0000008	2.077498 4.064487 2.058319 .055944 .000665 .000005		

```
m = 1.30
                                           I(B_n) |a_n|^2/2n+1
                                                               |b_n|^2/2n+1
     R(An)
n
                 I(A_n)
                              R(B_n)
                                  = 4.00
   +.4390583 --1.358052
                                                     2.716105
                                                                 2.149270
                                        41.0746350
                            -.6761007
   -.3973778
                                                     3.251846
                                                                 4.200980
               .5419743
                            4.3053535
                                        - .7001633
                                        4 .2970893
                .2365742
   +.2864162
                                                     2.838890
                                                                 3.565072
                            -.2916163
   -.1068154
               .0269710
                                                      ,5394209
                                                                  .158382
                            4.0591683
                                        - .0079191
   +.0154858
               - .0006552
                            -.0060739
                                        .0001006
                                                      .0196560
                                                                  .0030193
   -.0015590
               .0000078
                            +.0003725
                                          .0000004
                                                      .0003298
                                                                  .0000188
   +.0001196
                            -.0000214
                                                      .0000030
8
   ··· 0000071
                            4.0000010
   4.0000003
                                  d = 4.20
1
   +.371823
               -1.401343
                                                     2.802686
                                                                 2.294428
                            -.636177
                                        +1.147214
2
   -.363195
               620873
                            4.297392
                                        - .708505
                                                     3.725240
                                                                 4.251028
3
   +.291666
                 .292307
                            -.265179
                                         .413114
                                                     3.507686
                                                                 4.957372
                                         .021397
   -.142142
               4 .050585
                                                                  .427932
                            4.095765
                                                     1.011690
   +.024132
                                        + .000229
                 .001595
                            -.009165
                                                      .047845
                                                                  .006876
               → .0000231
3
   -.002678
                            +.000718
                                        - .0000017
                                                      .000973
                                                                  .000070
               - .0000002
   4.000227
                            -.000046
                                                      .000011
8
   -.000015
                            4.000002
   4.0000001
                                  a = 4.40
   4.333117
               -1.421962
                            -.552463
                                        ♦1.257232
                                                     2.843924
                                                                 2.514464
   -.307205
                            4.295929
                                                     4.188934
                                                                 4.259926
               .698156
                                        - .709988
3
   *.286847
               - .344471
                            -.215346
                                          .488378
                                                     4.133655
                                                                 5,860540
   -.177513
                .086747
                                         .054096
                                                     1.734932
                                                                 1.081927
                            →.146345
   ♦.003655
               - , 003681
                            -.015780
                                          .000680
                                                      .110431
                                                                  .020411
               + .0000687
   -.004773
                            ♦.001337
                                        → .000006
                                                      .002888
                                                                  .000242
7
   +.0004159
               - .000000648 -.000093
                                                      .0000363
   -.0000304
                            +.000005
```

+.0000018

						m = 1.3%		
n	R(A _n)	I(A _n)	R(E ₁₁)	$I(\mathbb{B}^{n})$	ian 22n+1	b ₁₁ ² /2n+1		
	d = 4.60							
123456789	4 .3143042 234540 + .273284 206217 + .053804 0072336 + .00071 0000: + .000004	-1.430965 + .761053 393573 + .135004 908073 + .000168 900002	407070 +.295392 1718620 +.200040 0266284 +.0024131 001829 +.0000145 000001	+1.379916 710529 +.527321 122001 +.001941 000019 +.000001	2.8619295 4.5663195 4.7228818 2.700077 .242184 .007065 .000114	2.759832 4.263171 6.327850 2.1/1/0010 .058211 .000790 .0000701		
			d = <i>l</i>	4-80				
12345 3789	+.303179158895 +.250685222357 +.0766560113797 +.001266000111 +.000008	-1.435990 + .801847 440752 190616 016795 + .000419 000006	213022 +. 290122 144240 +. 224991 043938 +. 004238 0003479 +. 0006235 0000012	+1.469112 715733 +.545170 227050 +.005343 000058 +.0000058	2.871980 4.811080 5.289024 3.812311 .503850 .017595 .000335	2.938224 h.291397 5.542015 h.541009 .160292 .002138 .000025		
			ವ = (5.00				
12345678910	+.286338 094045 +.217554 223959 +.104837 017539 +.002113 000208 +.000016 0000096	-1.443188 + .822581485934 + .246614032933 + .0009970000167 + .000000	216859 +.273526 130561 +.197694 070952 +.007279 000641 +.000047 000003	+1.467963730983 + .5524793324340142866001710000015	2,886377 4,935487 5,831208 4,932277 ,987981 ,041877 ,000934	2.935928 h.385900 6.629751 6.648675 .428581 .007193 .000086		
	≈ = 5,20							
123	+.249224 046497 +.162745 213006 +.135770 026451 +.7003438 000355 +.000012	-1.457381 + .830731 533707 + .297478 060136 + .002277 000044 + .000001	119806 236714 153249 141725 110039 012257 001150 000091	+1.490369 759563 +.539828 399754 036696 000486 +.000005	2.914761 4.984385 6.404482 5.949551 1.804075 .095640 .002472 .000039	2.930738 h.557375 6.477938 7.995082 1.100867 .020417 .000277		

	~5 0 ⊶								
n	$R(A_n)$	$I(A_n)$	R(B _n)	$I(B_n)$	$\left \frac{2}{2} \right ^{2}$	b _n /2n+1			
	2 = 5.40								
23456789	+.175940 015427 +.118338 192659 +.163631 039034 +.005466 000610 +.000055	-1.479072 + .833305 558248 + .340905 100653 + .005003 0001116 + .0000016	203742 +.168810 125427 +.091457 156004 +.020315 002012 +.000171 000012	+1.471796 797606 +.554987 430574 +.087032 001339 +.0000151	2.958143 4.999829 6.698973 6.818103 3.019596 .210142 .0062486 .000114	2.943592 4.785633 6.652844 8.6114 76 2.610967 .056243 .000847			
			Q = 5	5.60					
2 3 4 5 6 7 8 3	+.052704 003994 +.059840 165933 +.180695 056232 +.008521 001022 +.000099	-1.498146 + .833314 577129 + .376958 152345 + .010577 000271 + .000004	242884 +.064718 124338 +.058556 0183037 +.033223 0034115 +.000213 0000214	+1.459582 828277 +.5555503 442247 +.174947 003608 +.0000044 0000004	2.996292 4.999885 6.925546 7.539150 4.570356 .444239 .015157 .000318	2.919.165 4.969.659 6.666034 8.844.938 5.248413 .151536 .002482 .000030			
			a = !	5.80					
123456789	+.119413 018153 +.005130 133261 +.181682 078564 +.013004 001668 +.000667	-1.490433 + .832938 583238 + .406291 207881 + .021424 000633 + .000012 000000	254795 +.059791 117889 +.048344 159576 +.053548 005778 +.000559 0000/6	+1.455393 829021 + .558447 444745 + .273590 009559 + .000125 0000013	2.980865 4.997626 6.999453 8.125826 6.236437 .899807 .035435 .000949	2.910787 4.974126 6.701362 6.894899 8.207702 .401489 .007013			
	3 = 6.00								
123456789	 4.309146 034042 ÷.039947 095151 ÷.167183 105082 ÷.019528 002668 ÷.000030 	-1.433322 + .831940 580585 + .428890 258572 + .0411443 001431 + .000000	255777 +.170816 100495 +.033369 100278 +.091405 009586 +.000974 000085	+1.455038 796690 +.565474 447512 +.336811 026993 +.000343 000004	2.866644 4.991642 6.967018 8.577810 7.757156 1.728059 .080157 .002171 .000038	2.910076 4.780138 6.785684 8.950239 10.104335 1.133693 .019234 .000289			

n	$R(A_n)$	$I(V^{\mathcal{U}})$	$R(B_n)$	$I(B^n)$	a _n 2/2n+1	b_1 ² /2n+1			
•	₹ = 6.20								
1 2 3 4 5 6 7 8 9	+.479953 059000 +.073563 052490 +.142094 131760 +.030119 004186 +.000501	-1.326321 + .023135 573904 + .443792 299180 + .073580 003431 + .000074 000001	265757 +.246435 065373 +.031494 045059 +.123495 016239 +.001664 000155	+1.451337 752644 + .575913 44.7785 + .361043 061486 + .000988 000012	2.6526;1 4.974810 6.886847 8.875833 8.975394 3.090372 .192113 .005342 .000107	2.902673 h.51.5866 6.910952 8.955700 10.831300 2.582426 .055337 .000844 .000010			
_			d =	6.40					
2345	+.572151 100066 007700 +.111551 150725 +.041854 006447 +.000822	-1.234914 + .821139 566666 + .449868 328824 + .119644 006708 + .000176 000003	286113 +.288420 006405 +.031342 008315 +.153370 025423 +.002793 000275	+1.443281717374 +583263447806 +366455134052 +002435000033	2.469828 4.926835 6.799996 8.997365 9.864723 5.025042 .375643 .012686 .000288	2.886563 h.30h2h6 6.999156 8.956128 10.993639 5.630202 .136367 .002378 .000032			
			Q = 6	6.60					
1 2 3 4 5 6 7 8 9 10 11	+.627899161469 +.087678035441 +.078613153595 +.059404009776 +.001320000149 +.00015	-1.160174 + .800775 569843 + .447191 548957 + .173732 0138954 + .000405 000008	229946 +.3078630490311 +.029255011212 +.136972040883 +.004612000479 +.000043000003	+1.415981 697435 + .579183 448090 + .366324 226804 + .006392 000090 + .000001	2.320348 4.704647 6.838116 8.943824 10.468696 7.296724 .778140 .029192 .000743	2.831962 4.184612 6.950191 8.961799 10.989706 9.5257556 .357974 .006488 .000098			

作品并成為常數學。

n	R(A _n)	I(A _n)	R(B _n)	$I(B_n)$	an 2n+1	b _n i/2n+1
1 2 3 4 5 6 7 8 9 10 11	+.653485 239165 +.1275026 073210 +.044522 137942 +.0816160 014629 +.002226 000242 +.000027	-1.118046 + .757857 553988 + .437756 361178 + .224927 027742 + .000910 000023	444313 +.314505 159405 +.021317 020610 +.076682 064768 +.007536 000735 +.000074 000007	+1.354223 689975 +.540053 48988 +.365505 289191 +.016702 000241 +.000004	2.236091 4.547145 6.647857 8.755128 10.835353 9.446945 1.553525 .065515	2.708hh7 h.139851 6.480639 8.979758 10.965135 12.146006 .935324 .017336
-	-		d = 7	7.00		
1 2 4 5 6 7 8 9 10 11	+.663001 321811 +.141735 103501 +.009784 109231 +.106181 021597 +.003227 000461 +.000040	-1.100613 + .681334 546579 + .424781 366405 264397 052305 001.993 000049	-,570090 +.132793 221721 +.002987 023848 +.017451 094814 +.012194 001367 +.000142 000008	 ↓1.23734 – .811606 † .481164 – .449980 † .365109 – .308537 † .039339 – .000632 † .000009 	2.201226 4.088001 6.558953 8.495621 10.992163 11.104676 2.929091 .143466 .004444	2.474674 4.112676 5.773966 8.999604 10.953270 12.958543 2.202992 .045472 .000798